The Harveian Lectures
ON
PROGNOSIS AND TREATMENT IN PULMONARY TUBERCULOSIS.

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LECTURE III.[1]

Delivered on Nov. 15th.

MR. PRESIDENT AND GENTLEMEN,—In the previous lectures I asked you to think of the tubercle bacillus in its progress, of how we can estimate its influence upon the lung tissue and the general system, the extent of its progress, and the likelihood of its further action. Now I come to the question of how we can prevent its action and progress and remedy the results of its action. Once more I ask you to think of pathology, for in a perfect knowledge of that must consist not only our prognosis, as heretofore discussed, but also our rational treatment. We must consider (*a*) how we can increase the resistance of the tissues (normally present) to the influence of the bacillus tuberculosis and its congeners; (*b*) how we can hinder the action of the bacillus by destroying its congeners, the staphylococcus pyogenes and the pneumococcus; (*c*) how we can hinder the action of the bacillus by interfering somewhat with its own vitality; and, finally, (*d*) what means can we adopt to kill the bacillus *in situ?*

(*a*) We can obtain increase of the resistance of the tissues by adding to their vital power and this can be done, and has been done since the disease was first known, by over-feeding, fresh air, and adjuvant measures. Before recent agitation we had been doing all this, and I show you here a record from my in-patient department at the Hospital for Consumption and Diseases of the Chest at Brompton of a case, treated on just simply the old lines of care, supervision, good feeding, and especially discipline of habits under a competent sister of the ward. The patient gained in weight 21 pounds in a fortnight, and he is not a very unusual example. Others show similar improvement and that without other treatment which need be considered. The "Open-air Treatment" is, of course, good as adding to the vitality of the patient and increasing the resistance of his tissues. We have practised this, more or less, not only in pulmonary tuberculosis but in other diseases also, long before it was brought before the public so prominently as has been done recently. Debove first advanced the idea of forced feeding. Many had recommended open-air in phthisis, and yet let us give honour to the men who systematised the methods. But, like all enthusiasts, they were, as I think, somewhat wrong. It is right to stimulate the absorptive powers and to encourage them to deal with cod-liver oil, maltine, excessive food, and so on. It is right to make the patient breathe pure air, cold air (if needs be), and again to harden himself to exposure—*if he can do so.* But I would like to give you a word of warning. The profession seems to have gone mad on this matter. Remember what Wilkie said about *his* methods. Someone asked him how he mixed his colours so as to get such wonderful effects and he replied, "Juist wi' brains." Mix your prescription of open-air treatment (so-called) with a little common-sense. Now, is it common-sense to make a patient sit down and try to eat another mutton cutlet when he has previously vomited two? Yet I am told that this has been done in a well-known sanatorium and the patient commended for his perseverance. Surely his digestive organs required a little more consideration. And when we know a certain patient to be very liable to the effect of slight chills and also to inflammation as the result of such chills, is it necessary to put him into the open air, covered as it may be from the external atmosphere, but inhaling the cold air into his bronchi, in order to "harden" him? We sometimes cry down the methods of the bone-setters, rightly or wrongly; but surely what I have described savours of them, and I say at once that this idea is wrong. You must mix the open-air treatment and also the treatment in sanatoria "wi' brains" or else leave them alone. But let it not be supposed that I cry down the open-air treatment. I have seen what good it may do with and without the discipline of a sanatorium. I have known what good may be got by it, in the best of circumstances, also in such open air as we can obtain in the Brompton Hospital, there, too, with discipline and good feeding; and I have known one patient (whom I saw with Dr. C. F. Knight) to do surprisingly well when dwelling in a tent erected in a back garden in Fulham. But we must remember that all these are only methods of bolstering up the tissues against the bacillary invasion.

Drugs of all kinds have the same effect. So, too, have other remedies which will be mentioned later, though their advocates may possibly take a different view of their action. I have used arsenic for many years as a hæmic stimulant in pulmonary tuberculosis and for the reason that, from some cause or other, iron is not well borne by phthisical patients. I have seen good come from its use and I refer to the matter here because of what has recently been said as to cacodylate of sodium being a cure for tuberculosis of the lungs. I have used it, and it is useful. It is a good alternative when arsenic by the mouth is not tolerated, and when one wishes to give the same or even an increased dose of the drug by the skin. I have prescribed it in blood diseases and rarely with ill effect, but it acts only as a stimulant to the formation of red blood corpuscles and therefore can only have a very indirect effect upon the tubercle bacillus. It is a useful tonic remedy, and that is all.

Under this heading there may be mentioned my colleague Dr. S. H. Habershon's treatment by the subcutaneous injection of glycogen and that of De Backer by the administration of special preparations of yeast, though the consideration of the latter more properly belongs to a later section. Of these methods I have no personal knowledge and will say little. Dr. Habershon's idea is to increase the phagocytal power of the leucocytes by supplying them with glycogen as a stimulating food, and I hear from him that he has had some encouraging results. He has not yet completed his work but allows me to mention it here. De Backer holds the view that the yeast cells may act as additional phagocytes and absolutely destroy the tubercle bacillus. Allied to Dr. Habershon's method is that of subcutaneous injection of nuclein which will be more conveniently described below.

I cannot within the limits of the lectures discuss with you all the methods of treatment which have been adopted, and most of them discarded, in modern times. I wish to devote the remainder of this lecture to a description of a method of treatment of pulmonary tuberculosis and also of other disorders of the lungs which I have been working at for some time, which is on absolutely new lines, and which I have reason for saying is likely to be successful. I give it now to you for the first time in order that my professional brethren may form an opinion upon it. Its object is to fulfil the indications mentioned under the sections (*b*), (*c*), and (*d*). We would like to kill the tubercle bacilli *in situ* as mentioned in (*d*). But failing that, we may do good by weakening its action (*c*) and so enable the body powers to deal with it more advantageously, and finally, if we can produce no good action upon this very resistent tubercle bacillus, we may be able (*b*) to destroy the more vulnerable assistant germs, the staphylococcus and pneumococcus. What follows I must ask you to consider as a preliminary communication to which details will hereafter be added elsewhere, and I will style the subject

ASEPSIS OF THE LUNG.

It appeared to me that the anatomy of the lung-circulation lent itself to a special mode of treatment. We have seen how successful, and at times unsuccessful, may be the effort to increase the vitality of the lung by excessive feeding, open-air, and so on. No pronounced effect is produced on the disease by inhalations of antiseptic vapours, for these cannot be administered so as to pass the glottis in any such strength as could produce effect upon germs, even if the inhalations ever reached the lungs. They do not reach the lungs, for we have reason to believe that they never go much beyond the bifurcation of the bronchi in any appreciable strength. We know only too well, however we may appreciate our successes, that by all these methods we

[1] Lectures I. and II. were published in THE LANCET of Dec. 1st and 8th, 1900.

have a lamentable number of failures. The same, I am afraid, must be said of many other methods of treatment which have been put forward at various times and this view I mention with every due respect to the authors of those methods and to the immense amount of work which they have given to the subject. Undoubtedly the rational cure for pulmonary, as for all tuberculosis, is the administration of an antitoxin derived from the tubercle bacillus itself, as was designed by Koch. But, as you are well aware, this has hitherto proved useless and worse than useless. So we must still say of the further attempts in the same line by modifications of his methods. Some day, though probably not in our time, the end thus aimed at will be attained and then we shall have a perfect cure. But before this result is reached we must still go on treating our patients and trying to cure them. Again, attempts have been made to obtain an antitoxin from the growth of the tubercle bacillus, not on our laboratory cultivations, as was done by Koch, but in the living bodies of such animals as the ox, the ass, and the horse. I allude here to the so-called anti-tuberculous serums, all of which have proved to be practically useless. It has appeared to me at times that, seeing how tuberculous patients who suffer from pleural effusion seem to be much better when the effusion is allowed to be absorbed naturally and is untreated by paracentesis—and this you will remember I alluded to in my former lecture—that the good result might be due to the re-absorption of an anti-tuberculous serum grown on human soil. It is not easy to get such serum without doing an injustice to the patient, for, as I have stated, the effusion is best left alone. Yet occasionally it happens that an effusion is so great as to by its actual presence endanger the life of the patient. Such a case occurred to me a little time ago at St. Mary's Hospital and I determined, on removing the effusion, to ascertain whether it possessed any property which was antitoxic to the bacillus. But before using such a serum for experiment it is absolutely necessary to remove from it all active tubercle bacilli, and I could not conceive of any other method of doing this than by passing it through a Pasteur's filter under pressure. But the solution could not by any means be made to pass through the filter and so the experiment had to be abandoned. Possibly another chance of which I can take advantage may offer itself in the future. (It may be interesting to record the later history of this case in connexion with the danger from hæmorrhage to which the patient is liable in the third stage and to which I referred at the close of my last lecture. The patient, a youth, aged 18 years, was taken into the hospital because of his effusion and I aspirated his chest though I knew that he had phthisis in the third stage. After a few days he had recovered from his effusion and his phthisis being quiescent I allowed him to leave. He walked from the hospital down Praed-street, was overtaken by copious hæmoptysis before reaching the Great Western station, and was brought back to the hospital dead. I was very thankful that his hæmoptysis did not occur during my aspiration.)

I have mentioned the methods of Dr. Habershon and De Backer by which it has been thought possible to inject underneath the skin substances which may reinforce the lung tissue in its fight against the bacillus—namely, glycogen and yeast respectively. Dr. Habershon's work is not yet completed, and I am afraid that De Backer's results must be said to be unsatisfactory. Others, too, have attempted to administer antiseptics by means of the skin—that is, subcutaneously—and without any success. Nor is this to be wondered at when we think that any remedy placed under the skin must be diluted with all the fluids of the body before it reaches the lungs and then cannot fail to be powerless. For many years antiseptics, like creasote and its essence guaiacol, have been given by this method in so dilute a form, to begin with, as to be useless even if applied directly to the bacillus. Yet they are still further diluted in the stomach and more or less altered in their passage through the liver and other digestive organs so as to have not the slightest effect for our purpose when they reach the lungs. It is true that by reason of direct absorption through the blood-vessels of the stomach these drugs—especially creasote, guaiacol, iodoform, and naphthalene, all of which I have used—reach the lung unaltered and can be detected in the expired air. It is true also that these expired vapours are of some slight use in preventing the decomposition of the secreta in the lung. All of these points I have observed and willingly admit. But they have not the faintest direct effect upon the progress of pulmonary tuberculosis; in fact, they are almost useless. It has again been suggested by the followers of De Backer that the yeast-cells, and again other reagents, should be injected directly into the infected parts of the lung; and once more I admit that good results have ensued. But remember, however, that such injections cannot reach very far into the tissues, and they must be very numerous, therefore painful and frequently repeated, if they are to touch even the recognised foci of disease. But what about the unrecognised foci? For surely none of us, however experienced, will venture to say that he can detect by physical examination every spot of the lung affected by an attack of tuberculosis. And what about the patches which, recognised or suspected, are beyond the reach of any injection syringe? Surely there will always remain such spots, inaccessible to all such treatment and ready to spread to neighbouring and other parts of the lung. Such treatment cannot possibly be really curative. And as to the more surgical procedure of removing affected parts of the lung—and this has been done—well, the less said the better, for fear that the mere mention of it may encourage an unduly bold surgeon to practise it.

But let us come back to what I have mentioned above—that the anatomy of the lung-circulation lends itself to our treatment. This has been impressed upon me for some time, for it must be obvious that anything introduced into the veins must necessarily pass directly through the lungs by way of the right side of the heart and without dilution with other fluids of the body than the amount of blood contained in the right ventricle at the time when the injected fluid reaches that cavity. I determined to try this method, and with much trepidation when I thought of the manifest dangers involved in the introduction of a foreign substance into the blood-stream. But I was encouraged to pursue the investigation by hearing that my colleague, Mr. Ernest Lane, had been treating syphilis by injecting 2 per cent. solution of cyanide of mercury into the veins and by seeing the beneficial effects upon one patient of mine at St. Mary's Hospital whom he treated for virulent syphilis. I went to the Lock Hospital to see Mr. Lane's method, and seeing what he had done I thought that if he could inject cyanide of mercury with impunity—for he had done it some 3000 times without other mishap than the occasional missing of the vein by the needle—and seeing, too, that cyanide of mercury was not only anti-syphilitic, but also a powerful germicide, I also might safely use the same on tuberculous patients. Mr. Lane was in the habit of injecting 20 minims of a 2 per cent. solution, but I injected 30 minims of the same solution into the veins of two patients at the Brompton Hospital. But as that strength would be useless for my purpose, and wishing to use the drug in stronger solution, I asked my colleague, Mr. Plimmer, to inject a solution of 5 per cent. into the ear-vein of the rabbit. The rabbit died before the injection could be completed, and, as we found, from coagulation of blood in the right side of the heart. I immediately hurried, as you may readily understand, to see what had been the effect of the weaker injection upon my tuberculous patients and found that both of them had become very collapsed and had suffered from painless diarrhœal flux. It was obvious that what might be safe enough for Mr. Lane's otherwise strong men suffering only from syphilis would not do for my weakly tuberculous patients. Moreover, it seemed probable, though I offer this only as a suggestion, that the mercury of the cyanide combined with the albumin of the blood, causing coagulation and liberated cyanogen and the latter, combining with water, produced a considerable amount of hydrocyanic acid, the effects of which would be to cause vaso-motor collapse and the diarrhœa which was observed.

Let me here say that before using any other remedies and those in any particular strength I was always careful before applying them to patients to test their safety upon rabbits—or later on myself. Rabbits and monkeys are the only animals, except man, which offer suitable subjects for such trials, since their superficial veins can be easily reached without incision of the skin. Obviously, if the intravenous method is to be practised frequently, as it must be for therapeutic purposes, section of the skin by the knife is out of the question, and, indeed, I would incidentally commend to the surgeons the results of technique which I have arrived at in various ways, as being improvements upon the methods hitherto adopted for intravenous injection when employed for other purposes. Again, let me remark that all these trials upon animals were performed by Mr. Plimmer who possesses—as I do

not—the requisite legal permit. Rabbits were used as being cheaper and more easily obtainable than monkeys. Further, before any advance of method was attempted, we tried to inject about 10 cubic centimetres into the ear-vein of a rabbit, that is, five times the quantity I wished at that time to inject into a man, and weight for weight an enormous dose. This having been done with safety I concluded that I was justified in applying the method to man.

To conclude this part of the subject I must here refer to an objection which may possibly be raised in reference to experiments upon animals. It may be asked, Why did I limit myself to merely testing the safety of the various solutions to be mentioned and did not first produce tuberculosis of lungs in the animals and attempt its cure by injection? Here are my reasons. Rabbits and monkeys were the only animals available for this particular purpose and they are very liable to tuberculosis. But it is by no means so easy as you would otherwise suppose to artificially give them tuberculosis of the lungs with certainty. Tuberculosis of any other organ would be of no use for my purpose, for it is only the lungs which are supplied directly with blood from the external venous circulation. Now it is possible to infect a rabbit's lungs with tuberculosis by injecting an emulsion of a culture of tubercle bacillus into the ear-vein. Mr. Plimmer has occasionally done this but never with certainty. The emulsion is prone to coagulate and block the vein and it is very difficult to determine whether a given culture is toxic or not at the moment of injection. I tried to get tuberculous monkeys from the Zoological Gardens, wishing to attempt to cure them; this would I think, be an experiment permissible by the law. But the authorities of the Gardens, who were most courteous to me, naturally did not wish to part with their monkeys until they were practically moribund and useless for any therapeutic effort. Rabbits can be made to suffer from tuberculosis of the lungs by subjecting them to the inhalation of dust containing tubercle bacilli, as has been shown by Cornet. But such infection cannot be done without some risk to other persons than the experimenter. For instance, Cornet himself found that when he entered the room in which the rabbits lived, in order to stir up the dust, and in spite of taking such precautions as plugging his nostrils with cotton wool, nevertheless found afterwards tubercle bacilli in the mucous secretion of his nose. Further, such a series of results as could be obtained in this way would require an almost endless time and far more continuous observation than I could possibly give to them. But, of still more importance to a practising physician, there seemed this objection, that the animals could not tell one how they felt and in human beings we have to consider not only pathological anatomy but many other points in the well-being or ill-being which cannot easily be ascertained from animals. Therefore, I contented myself with ascertaining the safety of such remedies as I wished to apply—from observation on animals and myself—trusting for further results to actual trials upon patients.

Having failed, then, with the cyanide of mercury I cast about for some other germicide. Perchloride of mercury, carbolic acid, and other well-known antiseptics would obviously be useless because of their destructive action upon the blood. I tried, however, upon a rabbit the effect of the potassic iodide of mercury in the way described, for this salt is said not to cause coagulation of the blood. The result, however, was that the rabbit died in about an hour, not from intravascular coagulation like the former one, but from simple poisoning and stupor. Thus far the trials for an intravenous germicide seemed to be futile. I heard, however, from Mr. Wallas, the pharmacist, that diastase had been found to digest cellulose. Now it has been observed that the tubercle bacillus contains grains of cellulose[2] and it is probable that its envelope consists of some form of cellulose. From rough experiments which I made it seemed that diastase had really some power of destroying the tubercle bacillus as it exists in the sputum. This was almost a forlorn hope, but I determined to try the effect of a solution of diastase used intravenously. It was by no means easy to do, for diastase forms a very mucilaginous solution, totally unfit for such injection. Ordinary diastase I found to be quite useless, but it is possible to get a solution of taka-diastase of 5 per cent.—that is, the product known by that name and discovered by Takamine—by growth of germs upon bran. The sub tance has some undetermined composition, it is certainly mucilaginous, and has a diastasic power. It is of great use, as probably you know, in the treatment of flatulent dyspepsia by helping to digest the starches. It forms with water a thin mucilage which after standing for awhile deposits something which looks like a colloid form of some crystalline substance. After a while, however, a brown translucent fluid is obtained lying over the deposit; this is stable for a few hours, and undoubtedly possesses diastasic properties. But before using this as an intravenous injection it was above all things necessary to make the solution sterile of germs. For this purpose heat could not be employed, for it would destroy the diastasic ferment. The solution was too unstable and too mucilaginous to pass through a Pasteur's clay filter, and, besides, this process would require to be repeated immediately before each injection, which would be impracticable for clinical use. I tried the addition to the solution of such a small amount of perchloride of mercury as would probably act as a germicide. This precipitated the diastase in a few hours, but adding it shortly before the injection I managed to get a solution which would keep for a short time in the fluid condition and this I tried, without ill effect, upon rabbits. Later, Messrs. Squire and Sons prepared for me a fairly permanent solution of taka-diastase made with tri-cresol as the antiseptic, and afterwards with formic aldehyde in the strength of 1 in 250,000. This I tried upon patients with the view of therapeusis which I have mentioned. I injected 30 minims—that is, two cubic centimetres—at intervals of four days. But the immediate result of the infection (a result which appeared in about half an hour afterwards) was rigor, pyrexia, and sweating; in fact, an exact imitation of an ague attack. The pyrexia reached to the height of about 102° or 103° F. and afterwards the patients felt much better; certainly they took food more freely and there could be no doubt of some improvement in the condition both generally and as judged by the physical signs of the chest. Yet there was not so great an improvement as to encourage me to pursue the treatment. Mr. Horace Brown, F.R.S., so well known for his researches on diastasic zymes, very kindly gave me his advice on the question under discussion and suggested that I should try the effect of cytase, such as he had obtained from freshly crushed oats. He has shown, and has described in his published papers, that this substance is very powerful in digesting the cellulose envelope of cereals. I show you here a solution of cytase which has been prepared for me by Mr. Peter Squire in a form which might be used for intravenous injection, and the solution I have found to have a very definite solvent action even upon cotton-wool. Again, you see under the microscope two sections of barley. One has been treated with a solution of formic aldehyde alone—that is, with an antiseptic; the other with the same reagent, but also with cytase, and the latter specimen shows a marked solution of the cellulose envelope of the grain, while the former appears to be intact. We would like to get the same solution of the tubercle bacillus in the lung, but, unfortunately, the reaction is very slow and is likely to be greatly interfered with by dilution in the process of intravenous injection. I have obtained the solution of cytase which I show you only within the last few days. I will certainly try its effects, for possibly one may be able to hasten its action.

In the last lecture I mentioned the surprising effects which I had obtained by administering nuclein by the mouth in the treatment of such tuberculous glands as could not be removed by operation. I tried nuclein given thus, upon patients suffering from tuberculosis of the lungs, and without the slightest effect. The idea, of course, is that the nuclein will so strengthen the leucocytes as better to enable them to fight the bacillus. But it seemed to me desirable to ascertain what effect the same substance might have when used intravenously. For this purpose I employed the Liquor Nucleinicus of Messrs. Squire and Sons, a sterilised solution of the nucleinate of soda (which I show you), and I injected two cubic centimetres on each occasion. The results were exactly the same as in the case of the diastase solution, a distinct febrile reaction and afterwards some improvement in the condition of the patient but the results were not encouraging, nor do I think it desirable to use a remedy on a tuberculous patient which, like diastase, nuclein, or the tuberculin of Koch, increases, if only for a time, the already existent pyrexia. Yet I think this matter may very well be a subject for future investigation.

[2] See Lehmann, Bakteriologie.

The pyrexial reaction after the use of such prospective remedies is very curious and interesting. I may say here, with Dr. Habershon's permission, that in his experiments on the subcutaneous injection of glycogen, he found that the same febrile reaction occurred when the glycogen employed was not entirely freed from nitrogenous matter and did not appear when this matter had been previously removed. Again, during the last few months I have treated four cases of aneurysm of the aorta by the intravascular injection of sterilised solutions of gelatin, following, with some little modifications, Lanceraux's method. After each injection I observed a distinct febrile reaction, the temperature on one occasion rising to 104° F., but always (in these cases) without any inconvenience to the patient. Putting all the results together, one is led to the idea that the fever is dependent upon the introduction into the system, by any method whatever, of some foreign albumin.

But in the course of the above-mentioned experiments the question of antisepsis became, as I have hinted, very important, and I thought that one ought to ascertain whether the results had been produced by the diastase or the nuclein or by the antiseptic used to sterilise the solutions. Mr. Squire told me that he found 1 in 250,000 of formic aldehyde a sufficient antiseptic and this, and afterwards 1 in 100,000, I tried on rabbits and afterwards on patients. I need not give you further details, but let it suffice to say that I at last reached a solution of 1 in 2000 of the pure formic aldehyde gas, that is, 1200 times stronger than I had at first used. In my earlier trials I found that I could inject two cubic centimetres of solution in the space of five heart beats, but by later improvements in the technique I could admit into the veins at least one cubic centimetre for each heart beat and frequently double or treble this proportion if the patient could be kept quiet. The reason for measuring the rapidity of injection by heart beats and not by seconds you will see in a few moments. We can calculate with fair accuracy what is the strength of such a germicide solution passing through the lungs when injected into the veins. Using for the purpose of injection the syringe ordinarily employed with anti-tetanic serum, I at first found, as I have mentioned, that I could inject two cubic centimetres in the average course of five heart beats, meaning that two-fifths (or 0·4) of a cubic centimetre were injected with each heart beat and therefore mingled with each one filling of the right ventricle. The right ventricle of a man who weighs about 10st. 7lb. is believed to hold approximately 100 cubic centimetres, the solution used is of a strength of 1 in 2000, therefore the strength of the solution in the right ventricle will be $\frac{2}{5} \times \frac{1}{100} \times \frac{1}{2000} =$ 1 in 500,000. Not a great strength, it is true, but probably of some efficacy seeing that a certain amount of the reagent will remain in the lung to be added to by future heart beats. Moreover, as I will shortly show you, it is possible by other methods to inject quite easily one cubic centimetre for each heart beat and even twice or thrice that amount. But with the one cubic centimetre for each heart beat we reach a strength in the right ventricle of 1 in 200,000, which is of formic aldehyde a strength which has been proved to be a very efficient germicide. To anticipate, I may say that I have been able to inject 50 cubic centimetres in the space of 25 seconds, when the pulse was beating at only 60 per minute, and even this rate may at times be exceeded. But this speed means two cubic centimetres for each heart beat of a 1 in 2000 solution of formic aldehyde which is added to each filling of the right ventricle, making a solution of 1 in 100,000, which will sluice out the lung for the space of about 30 heart beats. This certainly must be a fairly powerful germicide even for the tubercle bacillus, let alone its more easily attackable congeners, the staphylococcus pyogenes and the pneumococcus. Therefore I determined to use such a solution in the treatment of pulmonary tuberculosis. At first I did not venture to inject more than two cubic centimetres at one time, but becoming bolder I increased the quantity and at the same time the strength of the solution until, by means of the syringe used for diphtheritic antitoxin, I could inject 10 cubic centimetres of a 1 in 2000 solution of pure formic aldehyde gas at one time. Wishing to go still further I thought it desirable to make the solution of the gas, not with plain water, but with normal saline solution so as to prevent any destruction of the red corpuscles, and it is this solution which I show you now, as prepared by Messrs. Squire and Sons, by their own methods of sterilisation, and called for convenience "Hæmasepsin."

It will be convenient now to describe the method of injection. It seems an easy thing to pierce a vein with a needle and to inject a solution into its interior. In practice it is anything but easy to do so. The vein rolls under the needle and presents great resistance to the piercing. Again, the needle, in spite of all care, will often transfix the vein or at least puncture the opposite wall. In either case not only does the injection fail but the solution is deposited in the circumvenous tissue and causes great pain. It is only after considerable experience and with a certain amount of technical skill that the injection can be properly given, and in view of the manifest dangers no one should lightly undertake it. I find it best first to ligature the arm above the elbow so as to make the veins prominent, and then plunge the needle boldly into one of the large veins on the front of the elbow. The ligature of the arm should now be loosened and the injection proceeded with, carefully watching for any swelling which would indicate escape of the fluid into the circumvenous tissue. I have tried to use a needle on the principle of the Southey's trocar, hoping that on the withdrawal of the point one might easily introduce the canula farther into the vein without risk of re-piercing the wall. This, however, I have not found feasible. Again, I have tried what one might call a valvular puncture—viz., perforating the skin first and afterwards piercing the vein at a higher point. This, however, is difficult to do because of the rolling of the vein—and it must be remembered that any attempt to steady the vein leads to its collapse—and, moreover, there is considerable risk of causing a troublesome hæmatoma in the subcutaneous tissue. For these reasons it is best, I find, to plunge boldly into the vein through the skin, first anointing the skin with carbolic vaseline, 1 in 12. Naturally the needle and the skin must be rendered perfectly aseptic and if the patient be very nervous the skin may be sprayed with a solution of cocaine to anæsthetise it, though this is really unnecessary.

So far, however, the limit of an ordinary syringe—10 cubic centimetres—was reached, and to give larger amounts with one puncture required special apparatus. I therefore devised and had made for me by Messrs. Squire and Co. a syringe (Fig. 1). It is really a miniature stomach pump the tube of

FIG. 1.

FIG. 2.

which holds a few cubic centimetres and can be replenished from the bottle without removing the needle from the vein. But this instrument must be used with the greatest care, since the mere movement of turning the stop-cock and reversing the piston is frequently just enough to cause the needle to transfix the vein and ruin the injection. Because of this I have employed mere hydrostatic pressure, using an ordinary 100 cubic centimetre burette of narrow calibre, so as to get as high a head of fluid as possible, and I connected this by an indiarubber tube with a rather wide-bore needle. The burette is furnished with a stop-cock, and the needle being rendered aseptic a certain amount of fluid is run through it so as to fill the whole apparatus with the reagent. I may say here, however, that no fear need be entertained from the entrance of a small amount of air into the veins. This is an old-fashioned surgical fallacy. For ordinary use the burette is the more convenient instrument, though somewhat cumbersome to carry, but occasionally it happens that the venous pressure is so great that the syringe is useful. It was by means of the simple burette and of a large bore needle that I was able to inject one cubic centimetre of the hæmasepsin during each heart beat. Later, however, I have used in addition to the burette the hand-pump you see here, which enables one to make a much more rapid injection (Fig 2). After the injection the needle is withdrawn. A little bleeding may occur and it may sometimes be necessary to cover the puncture with a few threads of alembroth wool and collodion, but commonly the pressure of the finger upon the puncture for a moment or two is enough to stop all oozing. The part is triflingly tender on the next day, but no further ill-effect is usually seen. The slow injection of the solution at ordinary room temperature is accompanied by a curious cramp-like pain in the fingers and up the arm as far as the axilla. This I have observed on myself. The pain can be prevented by warming the solution to blood-heat, but I have grave doubts whether this is desirable. The heating may possibly be done with due precautions without destroying the effect of the remedy, but it must be remembered that formic aldehyde is a very volatile substance and the heating of its solution may cause the gas to be driven away. The pain is not great and can really be very easily borne up to the injection of 50 cubic centimetres, so I think it better to give the solution cold; moreover, rapidity of injection almost minimises the pain. In this way by one or other instrument I succeeded in giving daily injections of 50 cubic centimetres without any bad or unduly unpleasant effect. This means, as stated above, that for at least 50 heart beats the lung was sluiced out with a solution of formic aldehyde of a strength of 1 in 200,000 or more. The stronger the solution and the more prolonged its contact with the lung tissue, the more powerful would be its action as a noxious agent on the germs contained in the lung. It was therefore desirable to ascertain the danger-limit of such injection. This could not be found by experiments upon animals—it was scarcely fair to submit a patient to the risk—so I had the trial made upon myself. One morning at about 11 o'clock I asked my house physician, Dr. van Praagh, to inject 100 cubic centimetres of a 1 in 2000 solution of formic aldehyde into a vein of my arm. I wished to ascertain whether the aldehyde passed out of the kidneys as such, and in about an hour it was detected in the urine by the rosanilin test. Incidentally, however, it appeared that albumin was present, but no blood-colouring matter, and that the urine was very acid. Now, at that time of the day the urine of an ordinary man is usually alkaline, and my own is generally so alkaline—as I have frequently observed—as to deposit phosphates at the time of micturition. The ascertained acidity of the urine was therefore abnormal and was probably due to the presence of formic acid, though I had no means at hand for testing this. In about another hour, all these conditions had disappeared. A few days later Dr. van Praagh injected into my arm, and at a somewhat quick rate, 263 cubic centimetres of a 1 in 2000 solution. We only stopped the injection because our stock of solution was exhausted, though I certainly experienced a good deal of cramp-like pain in the arm and a curious nervous uneasiness in the thorax and especially in the cardiac area. Immediately I passed urine which was copiously loaded with blood. Many red corpuscles were found in the urine, but not so many as would be expected from the amount of blood-colouring matter present. An hour later the urine was still more bloody. Then for about four hours it happened to be inconvenient for me to micturate, but on doing so it was obvious that the blood had formed small clots in the bladder, which were expelled only with some straining, and for some little time there was considerable irritation of the bladder. Still later the urine was of a brownish tint containing no ordinary albumin or ordinary blood-colouring matter, but I had no means at hand to collect it or to further ascertain its composition. On the next day all urinary changes had disappeared, but I was very dusky and yellowish as regards the sub conjunctival tissue. During this period, too, I had a certain amount of bronchial catarrh and was conscious too of being unduly irritable in temper. It was here a question as to whether the bad results were due to the formic aldehyde or to the volume of fluid injected, so four days later I determined to have injected a solution of 1 in 1000. This is really (as I found afterwards) a caustic solution and I could not bear the injection of more than 63 cubic centimetres. The injection was stopped because of the extreme cramp-like pain and faintness. Very shortly afterwards I suffered from severe bronchial catarrh, accompanied by much wheezing in the chest and the expectoration of considerable quantities of frothy, white mucus. Soon (but subsequently) there occurred catarrh of nearly all the mucous membranes, except, as far as one could ascertain, that of the stomach. There was much running from the nose and conjunctivæ, there was great irritability of the bladder, but no urinary change, and a mild but troublesome dysentery, the bowel pouring forth much clear mucus. On the next morning, too, there was a thrombus in the injected vein of about three inches in length, surrounded by an inflammatory zone and very painful. The thrombus has now become smaller and less painful, but it has not entirely disappeared. This was an unpleasant experience, but it served its purpose and showed that the maximum strength of solution to be employed in its then form must not exceed 1 in 2000 and the maximum injection must not be more than 50 cubic centimetres for an adult.

The experiments showed more. They are imperfect scientifically, for I was not prepared for the result and had not means at hand for its proper investigation. They are sufficient, however, for therapeutic purposes, and naturally I do not care to repeat them on my own person. They show that formic aldehyde is an irritant to the mucous membrane of the lungs and that even after passing through the lungs, its solution may be of sufficient strength to irritate the mucous membranes connected by circulation with the left side of the heart. I have already mentioned what strength of solution we may expect in the right side of the heart from the injection into the veins of a 1 in 2000 solution of formic aldehyde. Naturally this will be enormously diluted by the time it reaches the general circulation and it is difficult to estimate this dilution. But let it be remembered that a dilution insufficient to kill the tubercle bacillus may nevertheless weaken its action, and may still kill other minor germs, such as the staphylococcus pyogenes or the pneumococcus, the presence of which favours the growth of the tubercle bacillus. Experiments are in progress to ascertain the effect of various weak solutions of formic aldehyde on the growth and action of these germs; the results of such experiments I will publish later. Again, let me call attention to the fact that the aldehyde in strong solution caused bronchial catarrh. Below I shall have to mention that cough is not only unrelieved but often increased during the treatment of patients by this method. Possibly such mild irritation may be beneficial as a counter-irritant to the lung tissue, stimulating it to more healthy action, but its existence warns one that the treatment must be pursued with caution and frequent inspection. In fact, I have sometimes found, as I will describe, that improvement only appeared when the treatment had been suspended for a few days.

Again, to prevent disappointment, one ought to remember that the pulmonary artery—the only vessel directly affected by the intravenous injection—is not the only artery which goes to the lungs. As I have elsewhere explained it is the "functional" vessel of the lungs, while the bronchial arteries coming from the aorta are the "nutrient" vessels of the lungs and are not primarily touched by the injection. Nevertheless, I have not found great need for such warning in practice, so great is the diffusion through the pulmonary capillaries.

In estimating the result of such a method of treatment upon the human subject it is of all importance to take care not to deceive oneself. Of, say, 100 cases of early tuberculosis

of the lungs probably 90 will show good results with no other treatment than improved hygiene and feeding. If any new treatment were applied to such cases one could easily be persuaded that it was successful. Naturally one would always wish to carry on a treatment in an early stage, but judgment of the effect of such treatment would be futile. For this reason I have only tested the treatment on severe and even desperate cases, thinking it better to meet with some failures if only one could get good results in a few cases where other remedies might have probably been useless. I append a few of such results, to be followed by a further series shortly. The test points are the steadying and reduction of hectic temperature, the quieting of the circulation, the diminution of the amount of sputum, the disappearance therefrom of pus and of the tubercle bacillus and other germs, and the abolition of such physical signs as indicate active tuberculous mischief.

I will tell you, here, the method which I have pursued in testing for such results. In hospital and elsewhere I have treated thus some 50 persons. Some of them were at the Brompton Hospital with surroundings, feeding, and discipline specially designed for their complaint. Others were treated at St. Mary's Hospital with the ordinary course of dietary, &c., pursued in a general hospital. And not all of these had the intensive treatment which of late I have adopted. Dr. R. G. Reid of Lambeth has in consultation with me treated some 20 patients who might be considered equivalent to those at the Brompton Hospital, but with their own home surroundings. Dr. A. Findlater of Edgware, who is in charge of the Hendon Workhouse Infirmary, has similarly treated seven cases with practically home surroundings, but also in a country atmosphere, or as near that as one could obtain within easy reach of supervision from London. I must not here give you details of these cases but merely the summary of the results. Almost every case has shown some improvement and in some this has been very marked. Most usually in my own cases the physical signs have diminished in amount as the earliest indication of improvement; appetite and general condition have been better after injection, and in nearly every case the patient has gained weight. The sputum became more frothy and less purulent, and in a few cases tubercle bacilli and other germs have already disappeared. I show you here one such patient. He came under my charge at St. Mary's Hospital in the autumn suffering from a very marked outbreak of the multiple pleuritic form of tuberculosis. His temperature, as you see, showed a rapid decrease, his physical signs diminished, tubercle bacilli disappeared from his sputum, and now he seems to be perfectly well. If you will examine his chest you will find nothing but some thickening of pleura in patches on the left side. Dr. Reid's cases have shown similar results in spite of the somewhat hard circumstauces under which the patients were placed. Dr. Findlater, who is here to night, will tell you himself of his results, one in particular being extraordinary.

The patients should be carefully watched during the treatment, for you have heard how I myself suffered from the effects of an overdose of the injection. If the injection be pursued too long the formic aldehyde will unduly irritate the lung tissue and increase the symptoms. It is only practice and experience which can tell one when to suspend the treatment, but, as a general rule, I should think it desirable to give up the injections for a few days when the temperature has fallen, when the sputum has become mucous and frothy, and when the cough is unduly troublesome. With regard to the latter symptom I do not see the same objection to treating it by opium as obtains in ordinary coughs. This cough is due to irritation of the pulmonary mucous membrane, and the same irritation causes the excessive secretion of mucus. An opiate will relieve both and is not, I think, counter-indicated.

Though it is somewhat outside our present subject, I may here mention the results of the treatment on bronchiectasis. As you know, scarcely anything can have a fouler smell than the sputum from this complaint, and at times so bad is this symptom as to incapacitate the patient from intercourse with his fellows. A patient came under my care at Brompton who had been supposed to be suffering from this, though I found that he really had a tuberculous cavity of the base of the lung with pleural adhesions, which kept the walls of the cavity constantly stretched. This was a similitude of bronchiectasis. His sputum was very offensive, so much so as to render it undesirable to keep him in the same ward with other patients. It separated on standing into the three usual layers. At this time I had not given a greater injection than two cubic centimetres and that by the syringe. After even the first injection distinct improvement was observed in the condition of the sputum. It became almost devoid of odour, less purulent, and much less copious. He left the hospital much improved. I have treated a few typical cases of bronchiectasis similarly and with like, though not such immediate, results. But my last case requires special mention. My colleague, Dr. Percy Kidd, asked me to apply the method to one of his patients at the Brompton Hospital. The patient was a country policeman whose bronchiectasis and accompanying condition were so bad that he had been warned to leave the force if he could not get better. He was really unfit to associate with his fellow men. He had been treated by inoculations in our "guaiacol room," but when I saw him he was in a wretched condition, although he had showed some slight improvement. At this time he was coughing up much more than a pint per day of very foul sputum. I began with the two cubic centimetres of injection on each day and afterwards administered 50 cubic centimetres of injection by means of the burette. He rapidly improved and when I last saw him he was expectorating only three ounces of matter which had only a faint odour. He then had to leave the hospital in order to report himself so as not to lose his pension, but I have little doubt that he could have been permanently cured.

[Since delivering the lectures I have tried, by modifying the vehicle, to use a greater strength of the formic aldehyde solution. At present I will not give details, but I think the result can be accomplished. I purpose bringing the whole matter before one of our societies at an early date in order that it may be adequately discussed.]

ABSTRACT OF THE

Purvis Oration

ON

DIETETIC PROBLEMS.

Delivered before the West Kent Medico-Chirurgical Society on Dec. 7th, 1900,

BY GEORGE VIVIAN POORE, M.D., F.R.C.P. LOND.,

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DR. POORE commenced his address by expressing the pleasure which it had given him to accept the honourable duty which the society had asked him to perform, after which he referred to his anxiety first of all to do honour to the senior member of the University of London, and secondly, to do his best to keep up the reputation of the Purvis Oration. He said that he had taken for his subject one that must be in the minds of most of his hearers at the present moment, but he would like at the same time to explain that this particular subject was chosen some months ago and though it happened to be a singularly appropriate one in view of the crisis in connexion with beer that had arisen in some parts of the country, his selection was necessarily made without any reference to that state of things and without any knowledge that such an event was likely to happen. Charles Lamb in one of his well-known essays rather found fault with the members of a certain nation because they were too positive in their utterances. He said that they never seemed to be in doubt; if they were orthodox they were orthodox, and if they were infidel they were infidel, but they never seemed to wander in the dim twilight of dubiety. So far as the West Kent Medico-Chirurgical Society was concerned Dr. Poore deprecated this charge being brought against himself, because it was owing to the fact that the twilight of dubiety had settled

upon him in regard to some dietetic problems that he had ventured to address them.

Nothing in this world, he continued, made entirely for good and nothing entirely for evil: roses had thorns and silvery fountains contained mud. We had to balance our accounts and see on which side the benefit lay. Nothing was more remarkable than the change which had come over the dietary of the people of England in the last two centuries. At his club the other day he had taken down an old book of household accounts of the sovereigns of England extending from Edward III. to William and Mary, and it was curious to read how limited was the diet of people living in what was then considered to be the lap of luxury. Princes lived practically on fish, flesh, fowl, and beer, and on very little else. It was true that in addition to beer there were other fermented beverages such as wine and drinks made from honey, but many of the articles of diet which we of the present day consider essential were then remarkable for their absence. Sugar and spices were mentioned as real luxuries. Fresh vegetables were hardly mentioned at all, and but for the occasional introduction of pippins, referred to by Shakespeare, there was a lack of almost all fresh fruit. It was hard to imagine at the present day a dietary table without tea, coffee, cocoa, fresh milk, and such like, and without fresh vegetables. It must be remembered how late it was in the history of this country before the potato was introduced into dietetics. It was not till 1767 or somewhere thereabouts that it was introduced into the dietary of St. Bartholomew's Hospital. A country gentleman some years ago showed Dr. Poore some old half-yearly rent audit books and on the front page of the books were the summer and winter bills of fare for the feasts which took place at those audits. As late as 1780 no mention was made of the potato. The difficulties a couple of centuries ago in getting fresh meat, and especially fresh vegetables, in the winter months were very great indeed, and it was not until the improvement of agriculture and the introduction of the turnip and other roots as foodstuffs, and the subsequent improvement in horticulture and gardening, that fresh vegetables were at all available for the masses of the people. It could be quite well understood that scorbutic tendencies must have made themselves evident in the winter, and "spotted fevers," and the "purples," and the "bloody flux," and other diseases which had a scorbutic taint about them must have been rife. But with the improvement of agriculture and the advent of free trade this state of things passed away. There could be no doubt whatever that the admission of corn to this country free of duty, and food of all kinds at rates against which the home producer was powerless to compete, had improved the dietary of the population at large. When he considered the variety of foodstuffs which were grown in foreign countries and reflected how London was the best mart in the world—one where most things could be got at moderate prices, where bananas were almost as cheap as turnips and pineapples were not the exclusive luxury of the rich—he felt that probably to this fact more than to anything else we owed the approximate abolition of typhus fever, the total abolition of scorbutic diseases, and the general improvement of the public health. Erasmus had said in the sixteenth century that the masses of the British people were fed as well as the monarch, and this remark was not altogether inapplicable at the present day. There must, however, be something that had put a check on the improvement of public health which had undoubtedly taken place, and there were certain facts which must make us pause. One of these facts was the diminution of the birth-rate. Just at present the birth-rate had diminished more than the death-rate, and if we looked at the subject fairly we must see that there must be some lack of stamina in the people at large. Another cause for uneasiness was the large number of people living at the expense of others and those who found it impossible at the present day to maintain themselves in a condition of independence. He hesitated to speak of these persons as paupers because the word pauper had a political connexion, but the fact remained that there was an enormous number of people who lived in workhouses, asylums, prisons, and other rate-supported institutions, and the number of such persons seemed to increase rather than to diminish. There might be many explanations of this phenomenon, and he was unwilling to speak too positively of its causes. Infant mortality, again, did not show the diminution that was to be desired. The mortality under one year of age was as great as ever and we knew that these children had succumbed to dietetic diseases such as diarrhœa. Rickets was also a dietetic disease, and Barlow and Cheadle had pointed out that scurvy occurred among young children in consequence of dietetic errors. Then, again, women had largely given up the sacred privilege of suckling their offspring and they allowed their children to be brought up on advertised proprietary foods. It was impossible to avoid thinking that the enormous amount of dental caries must be due to some error or deficiency in diet. Most of those who worked in the City of London suffered from dyspepsia, and gastric ulcer was not less common now than it was formerly. Was it not possible that this was also due to some deficiency of diet?

In spite of all that had been done for public health the British constitution seemed very vulnerable to enteric fever, whether in this country or in South Africa, and it was impossible not to mention in connexion with it the insidious increase of malignant disease which puzzled every one. Another subject worth considering was the hand feeding of infants, a difficult question for the solution of which chemistry had been invoked. Attempts had been made to imitate human milk by various manipulations of the milk of the lower animals, but the chemical question was not the only one, for biological and other conditions must influence the digestibility of such milk. He was inclined to think that milk in the mammæ was entirely different from milk *in vitro*. When milk was withdrawn from the mammæ it underwent certain physical changes. It was exposed to infection and accidental contamination, its temperature fell, and it began to separate into its constituent parts; moreover, in a few hours it might become sour. Just in proportion to its remoteness from the mother in point of time the milk was more and more unsuited for the nourishment of the suckling. When a young animal was joined to the mother it was joined very much like the bud on the stock. It took in nourishment without exposure to the air or a fall in temperature, and the whole process was altogether unlike the taking of milk from a feeding bottle. Under natural conditions the child sucked a thin stream from the living cells of the mammæ direct into its own stomach, and surely that was a very different thing from taking half rancid food through a rancid indiarubber tube. On this matter we had little positive information, and although obstetricians were quite unanimous that breast feeding was in every way superior to hand feeding still when facts and figures were asked for they were not forthcoming. He had only been able to avail himself of one instance, the data being supplied by a medical friend who had three children, all thoroughly healthy babies. This gentleman had furnished him with figures which showed that two of the children, hand fed, had at the end of 11 weeks gained 37 per cent. and 25 per cent. respectively on the birth weight, while the third child, which was nursed at the breast, showed at the end of the same period an increase of 84 per cent. This was very remarkable, especially when it was added to the consensus of opinion in the matter. Of course the use of milk for failing health was common; his hearers would remember that in medical history there were accounts of invalids who had recourse in their extreme old age to the services of a wet nurse, and it is reported that Dr. Caius, the President of the Royal Society, had to be fed in this way. He was rather a petulant old gentleman, but when he got a sweet-tempered nurse his temper completely changed. Many years ago he (Dr. Poore) was called in to see a patient who belonged to the upper classes and who was in a pitiable state, the result of bulbar paralysis. This gentleman was attended by Dr. W. B. Cheadle, but about once a month he would become restive and on one occasion he called in Sir William Gull who told him that he wanted a little nourishing food and that at 11 A.M. each day he was to have half a pint of ass's milk with a *petit verre* of noyeau. The ass was driven to the door each day and the patient had the milk hot from the animal. The prescription was entirely Sir William Gull's, but it was represented as his opinion conjointly with those of Dr. Cheadle and Dr. Poore. Whether in consequence of the treatment or not the man lived for three years. On looking back at this case Dr. Poore was not at all sure that the prescription was not the cause of the prolongation of the man's life. Much was heard of the dangers of milk, most of which were attributable to the manipulation of the milk itself. Of the disease attributable to the cow we had very little certain knowledge. It had been proved that tuberculosis might be conveyed to the lower animals fed upon milk from a tuberculous udder, but we were very much in the dark as to the part which milk played in the causation of tuberculosis in man.

Evidence on this head ought to be forthcoming before drastic laws were passed regulating the supply of milk. In a herd of cows belonging to the best-known family in this country 38 out of 40 were found to be tuberculous, and this state of things had probably existed for many years. Alongside of this herd was a family of four generations, and as far as he knew there had not been a case of tuberculosis in that family. They should therefore pause before directing that all milk ought to be boiled. Variola and tubercle were diseases common to human beings and to cows. How was it that the variolous cow was at a premium and the tuberculous cow at a discount? He felt that children fed upon boiled milk were likely to suffer in health and that that deterioration in health might lay them open to tubercle. Milk that had been manipulated, whether sterilised or otherwise, ought to be labeled so that all might know what they were buying. Again, a habit was growing up of putting chemicals into the food of children. As a profession medical men ought to resist this. Enough was not as yet known about boric acid and it was disgraceful to make experiments upon babies. With regard to meat he thought that it was best when it was fresh, and most nourishing probably when it was raw. Of late years we had had a revelation in dietetics in relation to the thyroid gland. It was known that when thyroid extract was administered in suitable cases the stunted idiot would grow and develop physically and mentally and the myxœdematous woman would recover her health. That was a most remarkable thing. It was still more remarkable when it was remembered that this power of the thyroid gland was greatly decreased with staleness and was practically abolished by cooking and that the chemist could tell very little about the difference between the cooked and the uncooked gland—the one potent for action and the other that had no action at all. There was a belief, especially among the poor, that beef was most nourishing when raw, and this was probably not mere prejudice. The oyster—almost the only animal food that was taken raw in England—was known to be extremely digestible and stimulating. He reminded his hearers that one of the advantages which the South African Boer had had over us was in regard to his food. With a lump of biltong, the sun-dried flesh of the deer or ox, his commissariat was complete. British officers who had eaten biltong were all loud in its praises. He also referred to the charqui of South America, the pemmican of North America, and the hung beef of Hamburg. When animals were put to stress for food—when, for instance, dogs or cats were about to have puppies or kittens—they were very active in finding fresh food. When he saw his cat hunting for mice or stalking birds in a more than usually active manner he was perfectly sure that there was a litter of kittens in the coal-cellar. His friend Dr. Taylor had been carrying on some experiments for him with regard to the digestibility of muscle. The fresh quivering muscle of a rabbit, muscle in the condition of rigor mortis, and muscle when the rigor mortis had passed away, were respectively put into similar mixtures of pepsine and hydrochloric acid. In the fresh muscle the digestibility was 25 per cent. more than in the other samples. They seldom ate food that was absolutely fresh. To show that absolutely fresh food could be eaten with relish he instanced a case in the war in South Africa. A herd of deer were surrounded, killed, skinned, cooked, and eaten at once. It was an interesting thing to note that it was said that a coursed hare could be eaten on the same day that it was coursed, but on the other hand a hunted stag was an impossible food. He mentioned this because it was one of those things of which he should like to have more knowledge. Finally he asked what it was that happened to meat when it was hung and ripened? He could not give the answer, but he strongly suspected that there was a microbial action concerned. It was the cultivating medium which stimulated our appetite.

They were apt to look too much to chemistry in the matter of food. Who when they ate considered whether they were taking too much carbohydrate or too much proteid? It was what they digested that did good, and this depended on whether it was savoury and stimulating to the glands of the palate and so forth. If a person sat down to a repast selected so as to contain a certain percentage of proteids it was very likely that the stomach would rebel. He thought that there was too much of this sort of thing and that physiological chemistry was doing itself no good by it. He could not help thinking sometimes that there were manufacturing firms who kept chemists very much as advertising tailors used to keep poets and for the same reason. In conclusion, Dr. Poore referred to "shop eggs" and to the difference between fresh and frozen meat. He also gave a humorous account of a visit to a village on a Saturday night where the grocers' shop-windows were filled with potted vegetables and where the smell from shops in which slabs of semi-transparent flabbiness were frying in oil could be appreciated a quarter of a mile away. Replying to a note that was handed to him asking for his opinion on the doctrine of not taking any meat, he said, "All flesh is as grass."

THE CONDITION THREE YEARS AFTER OPERATION OF FIFTY SUCCESSFUL CONSECUTIVE OVARIOTOMIES;

FIVE PATIENTS LOST SIGHT OF, 32 IN EXCELLENT HEALTH, SEVEN CASES NOT QUITE SATISFACTORY, THREE UNSATISFACTORY, AND THREE PATIENTS DEAD.[1]

(Notes of some cases refused operation and of the author's unpublished fatal cases of ovariotomy are added.)

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THE statistics of ovariotomy have been made a subject of competition amongst surgeons, and it may be admitted that when the operation was new and its mortality was great the rivalry served a useful purpose, but now that the mortality is small the announcement that one has attained the lowest death-rate is apt to prove misleading; for the fact that a surgeon is able to publish a series of 50 consecutive recoveries from ovariotomy has not necessarily any scientific or clinical value. Even a much larger number of consecutive successes might be recorded without proving any special skill in the surgeon, whilst, on the other hand, there might be no discredit to an operator in the occurrence of fatal cases under his care at short intervals. The man who has the lowest death-rate is not by any means necessarily the best surgeon. The mortality is influenced to a considerable extent by two factors which are quite independent of surgical skill. One of these is chance. A surgeon may have a long series of simple cases or of difficult cases, and this factor cannot be eliminated altogether in any number of operations. It is obvious, however, that a man who has the opportunity of performing ovariotomy very frequently is likely to be asked to undertake an undue proportion of operations that are difficult and dangerous, so that his death-rate might possibly be increased in consequence of his recognised ability. It is also obvious that if a surgeon selects a series of cases from his work, as I have selected the cases which form the subject of this paper, the results recorded may offer no indication of his true death-rate. A brilliant series of successful cases may by chance be part of a very poor record.

Another factor which influences the death-rate is the care and skill with which the cases for operation are selected. Some of the authors of statistical papers on ovariotomy have asserted that they made no selection of the cases operated on. I do not understand such an assertion. Every surgeon must select his cases. It is hardly possible that a surgeon could see a large number of patients with ovarian tumours without meeting with a malignant ovarian growth which he could not remove. If he has met with such a malignant case and has not operated on it, whilst asserting that he has made no selection of cases for operating, he really makes an unjustifiable claim.

I have elsewhere pointed out[2] that a statistical paper on ovariotomy has little or no value unless it is accompanied by an account of the cases simulating those of ovarian tumour in which the surgeon has declined to operate, but I do not know of any series of cases in which this plan of publication has been adopted. In the series which I am now about to consider there are three cases in which the mistake of

[1] A paper read before the Medical Society of London on Dec. 11th, 1899.

[2] Illustrations of Some Modes of Death after Ovariotomy. Transactions of the Royal Medical and Chirurgical Society, vol. lxxviii.

refusing to operate was very nearly made, and in two of them operation was delayed for a considerable time because of errors in diagnosis. In one case I thought that the tumour was malignant, but on exploration of the abdomen I found a simple ovarian cystoma. In a second case a soft fibroid had been diagnosed four years before I operated. In the third case I opened the abdomen thinking that the patient suffered from chronic inflammation of the ovaries and Fallopian tubes. She had been under my observation as a hospital out-patient for many months, operation having been postponed from time to time after consultation with my colleagues. These cases might easily have passed out of my care, and indeed the second and third had passed out of other hands before I saw them. From this it is obvious that I may at times have seen cases of ovarian tumour without detecting the condition, and of course other surgeons may have had a similar experience.

Apart from cases in which the existence of an ovarian tumour is uncertain there are cases, such as two of those recorded at the end of this paper, in which ovarian neoplasms are diagnosed, but it is doubtful whether the patient has any chance of recovering from the operation of ovariotomy. Under such circumstances surgeons may come to different conclusions as regards the advisability of interfering; some holding that an operation is useless and therefore should not be performed, others maintaining that the boldest surgery is justifiable because cases of ovarian tumour complicated by very serious exhaustion or other adverse conditions are almost invariably fatal if left alone, whilst the patient may sometimes be restored to long life if her tumour is successfully removed. Clearly the decision which is come to in such cases must influence the death-rate, and therefore some record of cases in which ovarian tumours are known to exist or in which they might possibly exist but in which no operation had been performed, is essential if the publication of the statistics of ovariotomy is to have any scientific value, or any value for comparison with the statistics of other operators. It is obvious that a man who is keen to exhibit a low death-rate must tend more or less strongly to avoid operating on serious and dangerous cases. Quite apart, however, from any idea of future publication, every surgeon, I think, must have occasionally felt some hesitation in recommending and undertaking an unusually hazardous operation immediately after a similar case has proved fatal in his practice, or after a run of bad luck. That the treatment of a particular patient may be influenced by the state of a surgeon's statistics at the moment when he gives his opinion, is a possibility which should be eliminated by every available means; but undoubtedly the practice of publishing and comparing statistics, without giving any details of similar cases in which operation has been refused, tends to intensify the influence of the surgeon's personal, even if temporary, feelings on his treatment.

There is another very important and serious objection to the practice of publishing and comparing statistics of ovariotomy—namely, the fact that the figures are not all drawn up according to the same plan. Some surgeons have set aside in supplementary lists those cases in which the operation is incomplete or otherwise complicated. I have never been able to see any justification for this method from a scientific point of view, and from a clinical point of view it seems to me simply misleading to exclude incomplete or complicated cases from statistical tables. By such means it is possible to modify the death-rate to a very large extent. Take, for example, the six fatal cases which I reported in the Transactions of the Royal Medical and Chirurgical Society, vol. lxxviii. These were all of my fatal cases of ovariotomy at the time of publication. Two of them were incomplete and two were complicated by hysterectomy; and for these reasons they might have been put in supplementary lists and excluded for purposes of quotation from my death-rate. In the fifth case the tumour had already been explored by abdominal section by one well-known surgeon and another surgeon had refused to operate on it before I saw the patient. I completely removed a papillomatous tumour and the patient survived 35 days, death being then due to obstruction of the bowels. I attributed this obstruction to the irritation of serous exudations and of frequent tappings which had induced extensive adhesions. There is no doubt in my mind that I did right in removing this tumour, and that both from a scientific and from a clinical point of view the case should be counted amongst my fatal ones. But for purposes of comparison with other statistics this case might fairly be set aside by me or it should be carefully referred to by the other gentlemen concerned when their statistics are published. The tumour ought to have been removed when the abdomen was explored 18 months before I operated, and the chances of success would then have been far greater. Thus, for purposes of quotation, five out of six deaths might have been removed from my death-rate. The sixth death was due to a uterine condition, and it also might have been excluded from my statistics without much ingenuity, leaving no mortality. Some such manipulation would have been necessary to get a fair comparison with many of the published tables, but all six patients died after ovariotomy or attempted ovariotomy, and I repeat that I have never been able to understand why each one should not count as a death in my statistics. Any other plan would amount to this, that in publishing statistics a surgeon may determine that certain cases in which he has removed an ovarian tumour or part of one are not to be considered cases of ovariotomy, and, if the patients die, they are not to be counted as fatalities in his statistics of this operation, he alone being the judge as to which are to be eliminated. This method of setting aside and excluding from the death-rate cases in which ovarian tumours have not been completely removed has, unfortunately as I think, received the support of men of very high standing; but if cases in which the surgeon has failed to complete his operation may be excluded from statistics, another surgeon might with equal reason exercise his ingenuity in proving that his patients died from complications and not from ovariotomy. Thus the statistics of this operation might eventually depend, and do now to some extent depend, on a skill and ingenuity which are certainly not surgical.

It is not always easy to say whether the death of a patient is caused by an operation or not. For instance, a patient may get pneumonia and die a week or 10 days after a simple ovariotomy in which otherwise everything has gone well. Perhaps no one is in fault, and it may be abundantly clear that the death is not attributable to any want of skill or care on the part of the operator. It would be hard on a surgeon who was collecting statistics for purposes of comparison to have to include such a case amongst his deaths. Nevertheless, in the circumstances suggested it is fairly certain that the patient would have escaped the pneumonia if the operation had not been performed, and although it might possibly be argued that a death from an intercurrent disease should be excluded from the surgeon's statistics, because there is no necessary connexion between the operation and the death, it is also quite certain that in excluding such cases when quoting a death-rate to a patient the surgeon would conceal a risk which the patient must undergo if ovariotomy is performed.

Again, it is sometimes not possible to say whether an operation is an ovariotomy in the sense of *removing an ovary for new growth* or not. At the end of this paper I shall refer to a fatal case in which I am not prepared to say definitely whether I removed a suppurating ovarian tumour or an abscess of the ovary. In publishing this case a surgeon might fairly choose to put it amongst his operations for new growth or amongst those for inflammatory disease, but for scientific and clinical purposes it would be better to refer to it in the statistics of both these operations.

A fatal case which I shall hereafter record illustrates a fallacy seldom noted in statistics. It was first diagnosed as an ovarian tumour but the disease was really a severe pelvic inflammation. When an ovarian tumour is diagnosed the possibility that the disease may be something else always exists. There are some conditions, such as those found in certain cases of retro-peritoneal cysts and in some cases of cystic uterine fibroids, which it is quite impossible to differentiate from ovarian tumours before the abdomen is opened. Thus the risks run by a woman who is advised to have an ovarian tumour removed include those which may arise in case some other condition is found. Some of these conditions are easily dealt with by an experienced surgeon, so that possibly the average risks may not be greatly, if at all, increased by this possibility of a mistake in diagnosis being made. In one instance, however, that subsequently came under my care, a cystic fibroid tumour of the uterus had been cut down upon and the scar of the incision was 14¾ inches long when I measured it. A tumour of this kind always grows, and therefore ought to be removed, but the operator neither removed it nor told the patient to seek further advice, and an interval of two years and eight months elapsed before she came under my care, when I performed successfully a hysterectomy, which was

really a very simple operation. The case shows that the risks run by the patient in case of a mistake in diagnosis may be very considerable.

Owing to such considerations as the foregoing I have never paid much attention to statistics either in my work or in publishing an account of it. The majority of statistical papers concerning ovariotomy, especially those of recent date, seem designed chiefly to show the best side of a series of cases and if possible to beat the record as regards recoveries. The fatal cases which occur in every practice, if it be long enough, are, however, the really instructive ones. I have therefore published most of the deaths from ovariotomy and from attempted ovariotomy which have occurred in my practice, and I propose to relate those not yet published at the end of this paper.

My object in the present communication is to record the condition of a series of patients three years after the last operation of the series was performed (Oct. 2nd, 1896), and I have chosen 50 successful consecutive cases because they seemed to give a better foundation for a paper than a series in which there were some deaths from operation. I shall say little about the simple and satisfactory cases, but I shall record certain accidents and mistakes that occurred, and I will give a more detailed account of those cases in which the later condition is unsatisfactory or not so satisfactory as might be desired. Deductions from a comparison with the statistics of others would be utterly illogical, for it is practically impossible that another series of 50 cases could occur in which the initial conditions would make such a comparison useful in any way. Details of the operations and of the convalescence of the patients will be referred to only in so far as they seem important in connexion with the more recent conditions to be recorded.

Four cases in which operation was refused during the period covered by the 50 cases under consideration.—Before discussing the 50 cases referred to in the title of my paper I propose to fulfil the conditions which I have laid down as necessary in a statistical paper by recording shortly the cases which I saw during the period covered by the series under consideration, and concerning which I was conscious that I might possibly have made a mistake in refusing to remove ovarian tumours. These were four in number.

The first was the case of a hospital out-patient whom I was asked to examine by my colleague Mr. A. Corrie Keep. She was an elderly woman, who had an abdominal swelling which I diagnosed as a malignant ovarian tumour which I could not successfully remove. The inguinal glands were enlarged, and the tumour was firmly fixed in the pelvis. As the bowels were much loaded I advised that the patient should take some laxative medicine and be examined again later. She did not come back to the hospital and I have no knowledge of her subsequent history.

The second case was sent to me by the late Dr. R. E. England of Dover. The patient was a woman, 47 years of age, from whom Dr. Pregaldino of Ghent removed an adeno-carcinoma of the right ovary in November, 1894. On Oct. 8th, 1895, she consulted me, and I found a tumour, partly solid and partly cystic, which projected freely into the vagina to the left of the cervix uteri. The tumour extended along the left side of the uterus above the pelvic brim. The uterus was easily defined beside it, although firmly fixed to it, and the growth was so closely adherent to the pelvic wall that I thought that any attempt to remove it would end in failure. I therefore advised that no operation should be performed and the patient died nine months after I saw her. This is the only case I have seen in which a tumour that I believed to originate in the ovary sprouted freely into the vagina.

The third case was one in which I opened the abdomen on Jan. 14th, 1895. I found a tumour of the left ovary which was extensively adherent, but seemed as if it might be removed without much difficulty. Another tumour on the right side was firmly adherent to many coils of small intestine. The most easily reached of these coils had new growth penetrating its wall and protruding into the lumen of the gut. I did not persevere with the operation because a resection of bowel would have been necessary and there were many adherent coils behind, any or all of which might have required similar treatment. The patient recovered, but I regret that I have lost all trace of her.

In the fourth case in which I did not operate an abdominal growth and a uterine growth were discovered in a patient 50 years of age. The patient had a great deal of offensive discharge from the vagina and the uterine cavity was dilated and curetted in order to determine the nature of the uterine disease. A malignant uterine growth was diagnosed, but the case was not considered suitable for hysterectomy. After the exploration there was an irregular temperature with abdominal distension and pain. The gentleman who had curetted the uterus thought that the patient had an ovarian tumour with a twisted pedicle in addition to the uterine disease, and he asked and urged me to open the abdomen. It seemed to me, however, that if the uterine condition were malignant the abdominal tumour was also malignant and that the patient was suffering from an inflammation spreading to the peritoneum from the recently disturbed intra-uterine diseased tissues. Under the circumstances I considered operative treatment quite hopeless. I therefore declined to interfere, and the patient died. At the post-mortem examination a ruptured ovarian cyst was found with acute inflammation of the peritoneum in its neighbourhood. There was no twist of the pedicle. There was no malignant disease, but the uterus was affected by fibroid neoplasms, some of which had sloughed. The two questions of diagnosis which arose in this case are occasionally a source of very great difficulty. I was not in any way responsible for the diagnosis of malignant uterine disease; but some 12 or 13 years ago I saw a somewhat similar case in which I did not know what the patient was suffering from. I consulted a man of far greater experience than my own, and he said without hesitation that the patient had a malignant growth of the uterus, a diagnosis which I accepted. A few days after our consultation I was sent for because the patient could not pass water and was in great pain. She was in bed, and I suggested that she should try to pass water in the erect position. The bladder acted without difficulty, and the patient at the same time expelled from the vagina a putrid fibroid tumour of oval shape measuring nearly five inches in its greatest length. After that she rapidly recovered her health

In cases of doubt between malignant disease in the abdomen and an ovarian tumour, either on account of twisting of the pedicle or of rupture of one or more cysts, it is only by opening the abdomen that it is possible to make the diagnosis certain. But if this question should be placed before me again in a patient whom I believed to be suffering from malignant disease of the uterus, with peritonitis developing soon after the uterus had been disturbed by exploration, I doubt if I would operate unless it seemed feasible to remove the uterus also.

Five cases which have been lost sight of.—As regards the 50 cases now under consideration, I regret that there are five of them which I have been unable to trace. Their histories are shortly as follows:—

In the first of these cases the patient was a married woman, 40 years of age. She had noticed a tumour for nearly two years. I removed a multilocular ovarian cystoma which distended the abdomen as high as the costal margin. There were some very vascular adhesions to the pelvis and bladder, but the highest temperature during convalescence was 100·6° F. in the vagina, and after three days the temperature was normal. The patient left the hospital on the twenty-third day after the operation.

In the second case the patient was a widow, 60 years old, who had a large cystic tumour filling the abdomen. The tumour was deeply buried in the left broad ligament, and the sigmoid flexure was pushed high up in the abdomen by the tumour, to which it was firmly attached. There were some omental adhesions, but the chief difficulty lay in the deep enucleation from the broad ligament. The Fallopian tube formed a loop six inches long on the front of the growth, the fimbriated extremity being within an inch of the other end of the tube. The uterus was atrophied, and I could not discover the right ovary. The highest temperature during convalescence was 100·8° F. in the vagina, and the patient left the hospital on the twentieth day after the operation, being then very well.

The third case was that of a neurotic single woman, aged 33 years, who had a very tender tumour of the size of a duck's egg on the right side of the uterus. The pain made her quite unfit for work during four days of each period. At the operation there was no difficulty except that the ovaries had very short pedicles. There was a small fibroid tumour on the right side of the fundus of the uterus. Both ovaries were removed. The right was cystic and the left contained a dermoid cyst about three-quarters of an inch in diameter. During the first week of convalescence the temperature once rose as high as 101° F. in the vagina, the pulse at the same time being 70. The temperature came well down to normal,

but on the tenth day there was a sharp rise to 102·2°. Apparently this thermal disturbance was connected with the administration of a purgative. At this time the pulse did not rise above 72 and the temperature was again normal two days later. The patient left the hospital on the twenty-first day after the operation and she was then in very good condition.

In the fourth of these cases the patient was 26 years old. I diagnosed and removed an extra-uterine pregnancy of the size of a large Tangerine orange. An ovarian tumour of somewhat smaller size was also removed. The highest temperature during convalescence was 101° F. in the vagina. The patient left the hospital on the twenty-first day after the operation, the temperature then having been normal for a week.

The fifth case was that of a married woman, aged 27 years. The patient had been told that she was pregnant, although her menses had not ceased and there was no enlargement of the mammæ; but the abdomen was as large as if it contained a uterus at the seventh month of gestation. The patient was very feeble, with a weak pulse, and a loud hæmic murmur was heard all over the cardiac area. She was much afraid of the operation. I removed over three pints of ascitic fluid and a solid ovarian tumour weighing 2 lb. 14 oz. Mr. Targett examined the growth and informed me that it showed no evidence of malignancy. This patient had an attack of bronchitis and a high temperature for nearly a week after the operation. On two nights the temperature was as high as 103·4° F. in the vagina, and the patient's condition made me very anxious, but she slowly regained her strength, and about 18 months later she was very well. Since that time I have not been able to trace her.

In the remaining 45 cases, 32 of the patients seem to me to be in really good health; seven others have very little to complain of; three are in an unsatisfactory condition; and three are dead.

Thirty-two patients in really good health.—In 1887 I argued that the recovery of a patient after an abdominal section depends to a very great extent on the success with which the surgeon prevents intestinal troubles, and I showed that intestinal difficulties due to paralysis of the bowel and obstruction of the bowel had been generally mistaken for inflammatory conditions of the peritoneum. The views I then published are now universally regarded as correct, and the importance of paresis of the bowel as a factor in bringing about symptoms of obstruction after an abdominal section is insisted on by all who write on this subject. I would on this occasion further point out that not only the immediate result of the operation but also the future health of the patient is largely influenced by the extent to which the functions of the intestines are unimpaired or are interfered with by peritoneal adhesions. If adhesions exist in such positions that the propelling effect of peristalsis is hampered in any way they may induce much pain, constant indigestion, and a permanent liability to symptoms of intestinal obstruction of an acute or chronic character. It is an important fact that intestinal adhesions may stretch or become absorbed so as to give less trouble as time goes on. To such changes I attribute the fact that a number of the patients whom I now report as in every way satisfactory complained of bowel difficulties for varying periods after their operations.

It is not safe, however, to count too confidently on the disappearance of adhesions. I have evidence that they may be persistent for many years after an operation, and there can be no doubt that they may continue indefinitely. Hence, if an acute illness, with intestinal difficulties that might be due to an obstruction by band, arises at any time after an abdominal section has been performed, the fact that these symptoms may be due to adhesions should be kept prominently in mind. Under such circumstances I would urge that all the arguments in favour of immediate operation should be considered as of unusual weight. I have been forced in consultation to delay operation in two cases of this kind. In both death was proved to have been brought about by an obstruction caused by an adhesion. Neither of the patients had the slightest chance of recovering without an early operation, but one of them would almost certainly have recovered if she had been operated on when I first advised interference.

It is to be expected, therefore, that the best results after ovariotomy will be obtained in those cases in which the tumours have no adhesions and require no enucleation from the broad ligaments. If I put on one side the five cases which were lost sight of and the three cases in which the patients have died, I find that in 15 of the remaining 42 cases there were no adhesions, and no enucleation of the tumour was required. In 12 of these cases the present condition of the patients is thoroughly satisfactory. In 27 cases the operative difficulties varied from the slightest adhesion to complete union of the tumour to all neighbouring structures, and in some cases a very deep enucleation from the broad ligament was necessary. Of these 27 patients 20 are quite well. Thus in this series the proportion of really satisfactory cases did not greatly differ whether there were adhesions or not before the operation; but in the three cases which are not quite satisfactory after simple operations the patients have little to complain of and might very possibly have been quite as uncomfortable if they had never developed tumours requiring removal by operation, whereas in the seven not quite satisfactory cases in which adhesions were found three of the patients are now not at all as I would wish them to be.

Numerous adhesions do not, however, always lead to bad results. They cause no harm when the adhesions do not interfere with the function of the bowel. For example, the intestines in cases of tuberculous disease may be almost or quite universally adherent and yet bowel symptoms are not necessarily prominent. One of my cases in which adhesions must be numerous has already been published.[3] The tumour was an unusually adherent dermoid cyst and the patient during convalescence gave no cause for anxiety for 16 days. She was then allowed to get up and symptoms pointing to the existence of a pyonephrosis gradually developed; the patient became very ill, the temperature rose to 105° F., and she appeared to be dying. On the twenty-seventh day after the ovariotomy I incised the left kidney, which was very much enlarged, but I found no pus. Nevertheless, this second operation was followed by an immediate improvement and convalescence progressed favourably, being interrupted only by occasional attacks of pain and high temperature, which, however, were always relieved by purgation. The loin wound closed and in July, 1897, 13 months after the operation, I reported that the patient's health was thoroughly re-established. She still has occasionally a little pain which is relieved by the administration of laxatives. She can walk as well as can most of her friends, but she has not ventured to ride a bicycle or to take horse exercise, to which she had been accustomed. (Since the above was written the patient has told me that she is in excellent health.)

Within three weeks of the operation last referred to I removed another dermoid tumour from universal adhesions. These two operations were very similar, the patients being 32 and 35 years of age respectively. The second patient has also had occasional pains, which have been relieved by rest and laxatives, and she can now do everything she wants to, with the exception that if she stands for any length of time she becomes very tired. She can, however, ride a bicycle and skate freely without the slightest trouble. In both these cases it is fairly certain that a great deal of adhesion of the intestines still exists, the tumours having been literally peeled out of strong inflammatory attachments. Both growths were very hard, heavy, and irregular in outline, with many bony parts projecting under the surface, and the adhesions seemed to be due to the mechanical irritation caused by the rough surfaces, for one tumour had no twist of its pedicle, and the other had only the slightest turn, which was not sufficient to obstruct its blood-supply. Of course it is impossible to say positively that these patients have any adhesions now, but recently I have performed second operations on two very similar cases, with intervals of 18 months and four years and three months respectively after the first operations, and in each of them adhesions were very numerous, firm, and extensive, around the site of the first operation. Patients with such extensive adhesions, if they recover well from the operation, are more free from danger of serious trouble than they would be with one or two isolated bands of adhesion, because the danger of an obstruction arising after the patient has completely recovered from the operation is much less when a large area of intestine is fixed than it is when the intestines are for the most part freely moveable and are held firmly at one or two points only.

The history of another patient in whom no adhesions were found at the operation shows that bowel difficulties do not always depend on adhesions, but may be caused by a

[3] Twenty-six Cases in which an Abdominal Section has been performed a Second Time, Transactions of the Medical Society of London, vol. xx., Case No. 20, p. 26.

sluggish peristaltic action, such as may be found in patients who have not been operated on. This woman was 36 years old and had suffered from severe constipation for many years, for which horse exercise had proved very beneficial. This kind of exercise had to be discontinued when the patient's abdomen became of great size from the development of two ovarian tumours. For four months before the operation the constipation was very obstinate; and during convalescence the patient was much troubed in this way until I allowed her to resume horse exercise, when the bowels acted more satisfactorily, and she very soon reported herself as quite well.

Some of the other cases that have made good recoveries have points of interest. In one I opened the abdomen, letting out much fluid which I thought was free in the peritoneal cavity. I tapped a very soft, friable, multilocular cyst, and then found that I was working within a thin-walled cyst and that I had tapped a secondary cystic growth. I was not able to separate the main cyst from the peritoneum of the anterior abdominal wall at the site of my incision. I therefore cautiously opeped the cyst behind and exposed the small intestines which were only slightly adherent to the tumour. I was then able to separate the cyst from behind forwards. It was very thin-walled and firmly adherent to the liver and to the peritoneum of the anterior abdominal parietes. The patient, who was 23 years of age, had an extreme lateral spinal curvature and was very delicate. She had worn a spinal support from childhood. The enlargement of the abdomen caused by the tumour had been noticed only six months before she was sent to me. This operation was a very dangerous one on account of the extensive tearing of tissue that was necessary and the feebleness of the patient. So far as the operation is concerned, however, the result is perfect and since she left my care the patient has been able to dispense with her spinal support.

In four of the cases an ovarian tumour had already been removed at an earlier date. In one of these the bowel was injured at the second operation, but the result is very satisfactory. Mr. Knowsley Thornton removed a tumour of this patient's left ovary in 1882 and on Nov. 18th, 1895, I removed a tumour of her right ovary of the size of a small orange. This was deeply embedded in the right broad ligament with coils of small intestine firmly adherent to its posterior and upper surfaces. In order to make sure that the intestines were not punctured in removing the tumour I had to separate a large mass of matted small intestine which was firmly adherent in the pouch of Douglas. The walls of the intestine were torn in many places and at one point its lumen was opened. The perforation and many other injuries of the parts were sewn over with Lembert sutures; the patient made a good recovery and is now, four years later, quite well. As a rule it is not wise to meddle with extensive adhesions which have caused no symptoms of intestinal obstruction, but sometimes, as in this case, the surgeon has to effect a partial separation and then it may be wiser to proceed to divide all the adhesions. There is no more difficult question than to decide how much should be done in this way.

In one case of the series, owing to a mistake on the part of a nurse in counting the sponges, I left one in a patient's abdomen and removed it half an hour after she was put to bed. She also is quite well and the incident of the sponge gave rise to no trouble.

On one occasion I removed a cystic tumour of the left ovary and found a small horn-like growth on the right ovary. As the disease on the right side seemed to be confined to a small portion of the gland I removed the new growth with a wedge-shaped portion of healthy tissue and sewed the parts together by means of fine silk, leaving the greater part of the ovary. This patient writes that she has since been in good health.

The following case was reported as untraced when this paper was read. The patient was a single woman, 23 years old, and I diagnosed an ovarian tumour deeply buried in the right broad ligament. On opening the abdomen I found, as I thought, a tumour closely attached to the right side of the uterus. The uterus seemed to stand out so well to the left of the tumour that I expected the latter when tapped to shell out of its capsule easily and I therefore tried to complete the operation through a short incision. After tapping, however, I could not quite understand the conditions and on enlarging the incision in the abdominal wall I found that I had tapped the pregnant half of a double uterus. I very carefully closed the punctured opening. There happened to be a small cyst of the right ovary which I removed and the existence of which brought the case within the series under consideration. The patient, of course, miscarried and I had to scrape away the placenta and membranes, but she made a good recovery. I lost all trace of her until February, 1900, nearly four years after the operation, when I heard that she had been delivered of a seven and a half months child in a lying-in hospital. The resident medical officer of that institution has kindly informed me that when she left the hospital the whole uterus was larger than normal and that at the fundus it was possible to distinguish the left uterus, which was softer, from the right, which was smaller and firmer. The septum of the cervix was easily felt, the left os uteri being the more patulous. (Mr. Corrie Keep informs me that this patient, who had been under his care before I saw her, had been pregnant on a previous occasion—a fact which I did not know or had forgotten.)

There is one other case that should be mentioned amongst those in which the results are quite satisfactory. The patient had a dermoid tumour of very irregular shape, which was deeply embedded in the right broad ligament and which was diagnosed by myself and others as a fibroid uterine growth. Before and for months after the operation I found granular and epithelial casts in the urine which was pale and was passed in large quantity. Its specific gravity was never above 1010 and it did not contain albumin. Five months after the operation the patient had an acute attack of nephritis, with much blood in the urine, but she is now in a very satisfactory condition; she looks well, does a great deal of work, and has not required medical assistance for nearly three years. A specimen of her urine examined in June, 1900, contained a decided trace of albumin and a very small quantity of pus or proliferated epithelial cells, with a few vesical epithelial cells, but no renal casts were found, nor was any blood found. The urine was acid and its specific gravity was 1013.

Several of the patients have had intestinal difficulties from which they have perfectly recovered. In one I thought malignant peritoneal growths might be developing, but the suspicious lumps which I felt in the abdomen were cleared away by laxatives and enemata and the patient is now quite well again. In another case I removed a large multilocular tumour with very friable walls, which had already burst in places before the abdomen was opened. The second ovary was also taken away. I thought both ovaries were completely removed, but the patient, whose age was 36 years, had a slight white and red monthly discharge from the vagina until very recently. Two years after the operation this patient had an attack of severe dragging pain in the abdomen lasting a week, and she was afterwards confined to bed for four months there being much difficulty in getting the bowels to act. The patient is now very well, and the periods have quite ceased.

In one case I thought that the tumour was malignant, but it was not examined microscopically. The patient has remained quite well. Several of the patients have borne children since their operations, one as early as 13 months afterwards. Two patients have married after single ovariotomy, and two after double ovariotomy. The latter appear to be quite happy. (One of the patients married, after double ovariotomy, in July, 1899, at the age of 25 years. She was quite well till Christmas when, after nursing her husband through a serious illness of some months' duration, she suffered from bearing-down pains with a vaginal discharge, and became very thin. I have not seen her since then.) In the whole series I have no knowledge of any case of hernia, but I have not examined all the patients.

Seven cases which are not quite satisfactory.—Of the cases in which there were no adhesions and in which the results were not quite satisfactory one patient was operated on when she was four months pregnant. The operation was quite a simple one, the tumour being of oval shape and about five inches in its longest diameter. The patient had no trouble after delivery at term, but she took little care of herself. Although advised to wear a belt she did not do so. She has now very lax abdominal walls, with wide separation of the recti muscles, but there is no hernia of the scar. The condition might have arisen without the operation having been performed, and was due to her neglect of obvious precautions. Of course, the tumour described did not cause any very great abdominal distension at the fourth month of pregnancy. (This patient died from acute pneumonia on April 9th, 1900. Obviously the condition of the abdominal

walls must have diminished her chances of recovery from an acute lung disease.)

The second case was that of a woman, aged 50 years, who had borne 10 children. She complained much of debility and of an occasional dragging pain in the side. She also had a "pendulous belly," for which she had not worn any support. (When last I examined these cases, December, 1900, I could not find anything abnormal in either of them beyond the laxity of the abdominal walls.)

The third patient was 38 years of age. She said that she was in very good health but that she suffered from occasional soreness in the left side. I have not seen her recently.

In these three cases the unsatisfactory conditions might have arisen if the patients had never developed tumours requiring operations. Nor were the conditions very serious in four of the seven cases in which, after operations complicated by adhesions, the results were not altogether satisfactory. In one of these cases I removed a small tumour deeply embedded in the right broad ligament. The patient was 37 years of age and had complained of pain and weakness in the back for 16 years before the operation. Now her only trouble is that her back is not strong. Everything else is satisfactory.

Another case was that of a woman, 43 years of age, from whom I removed an ovarian tumour deeply embedded in the right broad ligament and so thick-walled and red in colour that I mistook it for a fibroid uterine growth. Even after the abdomen was opened the tumour seemed to be a part of the uterus, but an exploring needle showed that it was cystic, and when the fluid contents were drawn off the relations of the parts were easily defined. The attachments were so extensive and the tumour was so friable that it was impossible to be certain that I had removed the whole of the new growth. The left ovary, which was also cystic and deeply buried in the broad ligament, was removed. This patient has complained much of pelvic and abdominal pains, but she can get about freely. She is very fat but not flabby, and she has all the appearance of being in robust health.

Another patient, aged 23 years, at the date of operation in January, 1896, had two ovarian tumours, each of about the size of a big cocoanut. That of the left ovary, which had a very long pedicle, was situated in the right loin, no part of it being on its own side of the middle line of the body. The pedicle had become twisted, and the tumour was firmly adherent in the situation described. The tumour of the right ovary was in the right side of the lower abdomen, below and rather to the inner side of the left one. It was firmly adherent to the other and slightly adherent to neighbouring structures. Both tumours were removed. Since the operation the patient has been without any obvious signs of ill-health. She is stout and full-blooded, but she has complained a great deal of pain in the back and sensations of creeping in the head which are very distressing. The abdomen is soft and natural in every way to palpation, but the bowels are very constipated. The case seems to be one of severe neurotic symptoms due to the artificial change of life; and probably a gradual improvement will take place. I may add that the patient's medical attendant wrote recently that she had enjoyed excellent health since the operation. She is now at work.

In another case the patient, a married woman, aged 34 years, suffered from chronic inflammation of the ovaries accompanied by increasingly painful menstruation for seven years. She was under my observation for two years, and had been confined to bed for considerable periods under medical observation with only temporary benefit. The presence of new growth was not suspected. Eventually I opened the abdomen and removed two small ovarian tumours which were deeply embedded in firm adhesions. This patient made a rapid recovery but her periods have not ceased. About 18 months after the operation they became somewhat painful, and there was tenderness in the left broad ligament on palpation. In this case the sexual appetite has been so increased as to be a source of great distress. When I operated I thought that I removed both ovaries completely, but it is not possible to be certain of this when many adhesions have been separated. (Since the above was written this patient has had prolonged intervals between the periods, and probably the menopause will shortly be established. With the exception of the nervous symptoms the general health is very good.)

The results cannot be described as very bad in any of these seven cases, although they are not so good as might be desired.

Three cases which are unsatisfactory.—In the three following cases the results so far have been decidedly unsatisfactory. In the first I removed a small, flat tumour of the right ovary from numerous very strong adhesions. The patient had felt big in the abdomen and had suffered from increasing backache and difficulty in walking for three years before the operation. Since the operation she has had much trouble from constipation, weakness, and pain in the side aggravated by walking. Her condition recently in these respects is better than it has been and I may add that the patient seems to consider her health much more satisfactory than I think it. (Since the above was written this patient has improved very much. She says that she is in good health though she cannot walk very far. She is able, however, to "do a great deal of walking about indoors, mounting the stairs, about 40, many times a day." The bowels give little trouble and aperients are not required so often or in such quantity as was necessary a year ago.)

The second unsatisfactory case was that of a woman who had suffered from attacks of pelvic inflammation for six years before I saw her. She had been in several hospitals. In one she had been put under an anæsthetic and plugs had been inserted every night for a time, but she got no benefit. I removed a small cystoma of the left ovary which was firmly adherent deep in the pelvis. The ovary and Fallopian tube on the right side were also fixed by strong adhesions and were removed with difficulty. Possibly the appendages were not completely extirpated in this case. The patient continues to have discharges of blood from the uterus, sometimes as frequently as every fortnight. She has had attacks of peritonitis occasionally, like those which occurred before I operated, and recently these attacks have been more frequent. (In June, 1900, this patient was better in many ways, but she still had attacks of pelvic pain, although these did not occur so frequently as they did a year earlier. There was a tender thickening of the tissues in Douglas's pouch. The patient looked much more healthy than she did when I saw her 18 months earlier. This patient and the patient in the previous case are certainly improving in the local conditions, probably on account of a gradual yielding of adhesions.)

The last living case to which I shall refer was that of a patient whose age was 42 years. She had first noticed the abdomen large three and a half years before I saw her. It grew rapidly, and then all the signs of a rupture of a cyst occurred—namely, sudden violent pain followed in three days by complete disappearance of the swelling. In a few months the abdomen was again large, and again the tumour ruptured. This happened a third time. Two months before the patient consulted me her abdomen was tapped and three and a half gallons of clear fluid were removed. At the operation I found considerable omental adhesions and the pedicle of the tumour was very broad. The second ovary was healthy. This patient made a smooth convalescence. The temperature in the vagina rose to 101° F. on the second evening and was normal within a week. I have not seen her since she left my care a month after the operation, but she writes that she is much better than she ever expected to be. She says that she cannot hold her arms up without a burning and aching in her side and that she has "a great weakness." She cannot eat solid food. If she does she "is sure to bring it up again." The patient, who was a widow, was, however, well enough to re-marry within two years of the operation.

Three cases which have died.—Of the three patients who are now dead one has been referred to already in the earlier part of this paper. I thought that the growth was malignant, but I explored the abdomen and removed a simple multilocular cyst. The patient was subject to frequent severe attacks of asthma and was extremely emaciated and feeble. She had no asthmatic attack, however, whilst under my care, although convalescence was prolonged very much by the formation of a bedsore. Recovery was ultimately good. Two years and three months after the operation the patient died from bronchitis complicating an asthmatic attack, the illness being of only two days' duration.

In the second of these cases the patient died from malignant disease six months after the removal of a semi-solid ovarian tumour. There were some adhesions to the omentum, but no real difficulties were encountered in the operation or during convalescence. Both ovaries were removed. Within three months the patient suffered from severe and increasing constipation. By the kindness of Mr. F. M. Corner of Poplar I saw the patient about a fortnight before she died and she

then had large masses of new growth in the upper part of the abdomen.

The third case in which death has occurred was also one of malignant disease. The patient was 35 years of age and I had no doubt that she had an ovarian tumour. This had been diagnosed in India, but the patient had come home with the idea that she might be pregnant, and Dr. F. H. Champneys kindly saw her with me and confirmed the diagnosis of ovarian cystic disease. When I opened the abdomen I exposed an ordinary cystoma of the right ovary with a fairly small base. There were no adhesions. However, when I had tapped and extracted the cyst I found that there was a solid tumour attached to it by a narrow neck. This solid growth was of the size of a very large orange and of a somewhat flattened, oval shape. It was buried in the outer part of the broad ligament, and was pressed so tightly against the iliac vessels and the pelvic brim that I had considerable anxiety as to whether I should succeed in removing it and arresting hæmorrhage. I was able, however, to get away all the visible new growth more easily and completely than I expected, the broad ligament being secured in many pieces. On the left side there was a slightly smaller solid tumour buried in the broad ligament exactly like that on the right side. This was attached by a narrow neck to an apparently healthy ovary in precisely the same way as the solid tumour on the right side was attached to the base of the ovarian cyst on that side. That is to say, both the solid tumours were completely extra-peritoneal between the folds of the broad ligaments. On the left side the ovary was attached to the broad ligament in the usual way and the solid growth was attached to it between the folds of the broad ligament. On the right side the ovary was replaced by a cyst which was also attached to a solid growth by a narrow neck between the folds of the broad ligament. I also removed the left ovary and tumour. I have never seen any tumours which at all resembled these solid growths in their situation and connexions. Microscopically they consisted of an epithelial growth of a papillary type. I exhibited the tumours at the meeting of the Obstetrical Society of London on May 6th, 1896, and a note concerning them appeared in the Transactions of that Society for that year (p. 166). The patient made a good recovery and returned to India in excellent health a few months later, but I warned the medical man who had sent her to me that her future must be looked upon with great anxiety. Eighteen months after the operation the patient (having lost her husband very suddenly) was again in England, and she consulted me in May, 1897, when I found a return of the growth. The tumour seemed to be to some extent moveable, but it had very extensive attachments in the pelvis and to the uterus. I decided that it could not be removed. I expected to see the patient again in July; but on the 9th of that month I was informed that she had been placed by her brother, who is not a medical man, under the care of another surgeon, the physician who had sent her to me not having been consulted. The patient had been seen twice by her second surgeon with an interval of about a month. I was informed that he stated that the tumour was growing rapidly and that he asserted in the most positive manner that it was not malignant, but that it must be removed at once. Neither I nor the gentleman who sent the patient to me was consulted, and the facts stated in the Transactions of the Obstetrical Society of London must have been unknown to the surgeon under whose care the patient had been placed. He operated on July 7th, 1897, and I understand that the difficulties encountered were very much greater that he had anticipated. The patient died on the next day. The operator was a man of very large experience. The incident proves the soundness of the opinion which I put forward at the beginning of this paper—namely, that mistakes are to be expected in dealing with these cases, and that statistical papers are of no value unless this possibility is recognised and full details of all cases are given whether an operation is performed or not.

The study of these and other cases has impressed upon me very strongly the importance of an early recognition and removal of ovarian neoplasms. When a tumour is buried deeply in the broad ligament at the beginning of its growth it is only by the merest chance that its removal will become more easy as time passes. It is quite as likely that it will bury itself deeper, and in every case delay in operating exposes the patient to the onset of complications which may cause great difficulty and great danger when the abdomen is opened or before an operation is arranged for.

I wish now chiefly to point out that when inflammatory conditions are set up around an ovarian growth the risk of trouble *after complete recovery from the operation* is very much greater than it is when there has been no inflammatory disturbance. All the patients whose cases I have traced in the series under consideration in which the operation was simple, are practically in good health with the exception of the one who died from asthma (and, of course, of the one who died from pneumonia since this paper was read); and those who are known to be in bad health now had all suffered from prolonged inflammatory attacks before being operated on. There can, I think, be no doubt that in a series of uncomplicated operations for simple ovarian tumours, the success ought to be very nearly, if not quite, complete and perfect, and therefore no opportunity should be allowed for the development of complications by delay in operating. If the possibility of the existence of a malignant element in the tumour be considered the urgent necessity for early operation is still more obvious. Nevertheless, cases are even now seen in which, although ovarian tumours are recognised, either the patient is advised to wait till serious symptoms arise before being operated on or the possibility of operative treatment is not suggested.

There are, of course, cases in which the patient, on account of bashfulness or timidity or simply because there has been no sign or symptom of mischief, does not consult a medical man until some complication forces her to do so. When, however, an ovarian tumour is diagnosed it should be an absolute rule to have the question of its removal discussed at once. I have occasionally told a patient that I did not anticipate any harm from a delay of a few weeks, but the circumstances are very few in which it is advisable to postpone the removal of an ovarian tumour beyond the time necessary to make proper arrangements for the performance of the operation; and the reason for delay should never be that the patient is quite well. There must, of course, be always some risk in performing even the simplest ovariotomy, but this risk is smaller than that of allowing the tumour to remain. Although I am now chiefly urging an early resort to operative treatment in the interest of those patients who recover from ovariotomy, because the dangers of after-trouble are so much less if the operation is uncomplicated, and although I had not intended to deal with any cases operated on beyond the period during which the 50 cases referred to in the title of my paper were under my care, yet my unpublished fatal cases show so forcibly the increased immediate danger of an ovariotomy when the operation is too long postponed that I am only following out one line of argument by shortly recording the fatal cases of ovariotomy that have occurred in my practice and which are not already published.

FATAL CASES NOT HITHERTO PUBLISHED OF OVARIOTOMY AND OF OPERATIONS UNDERTAKEN WHEN OVARIAN TUMOURS WERE SUPPOSED TO EXIST.

In two of these cases the patients did not seek medical advice until forced to do so by their inability to go about their work any longer. The first was a case of a single woman, 53 years old, who had known for some years that she was growing very large in the abdomen, but she did not consult a medical man until 14 days before her operation, and she was admitted to the Samaritan Free Hospital as soon as this could be arranged for. I do not remember ever to have seen a patient look so ghastly as this one did. Her hair was dark; her face showed no blood anywhere; she could not breathe unless she was sitting absolutely upright in bed; and she maintained this posture day and night by supporting herself on her hands. Her face and neck and her shoulders had little but skin over the bones, and her enormous abdomen increased by contrast the appearance of her anæmia and emaciation. Her temperature varied between 98·4° and 100° F. Her pulse, which ranged from 130 to 140, was very feeble. She was too ill to answer questions, and as she had lived alone no satisfactory history of her case was obtained. The abdomen was immensely distended, had a glazed shining appearance over its whole surface, and was very tender. It evidently contained a cystic tumour which also distended the pelvis. Obviously the prognosis was very bad, but after a few days the abdomen seemed a little softer and I thought it right to operate. I opened the abdomen on Dec 30th, 1898, and found a large tumour with recent adhesions to all the surrounding parts. Layers of white lymph, from a quarter to half an inch thick, covered its upper surface and extended

between the coils of small intestine, which were matted together in the upper part of the peritoneal cavity. I removed the tumour, which was a suppurating multilocular ovarian cystoma, and I secured a thick pedicle on the right side in several pieces. Much lymph was taken away and the abdomen was closed, a drainage-tube being left in Douglas's pouch. In the evening, after the operation, the patient expressed herself as very comfortable. She could lie down and breathe comparatively freely. Her temperature was 100·8° and her pulse was 136. In the night the bowels began to act and the patient collapsed and died rather suddenly between three and four o'clock on the next morning. After death it was found that the last six inches of the ileum were in a sloughing condition. It is quite possible, and I think likely, that a month before this operation was performed the patient had a very large ovarian tumour without inflammation, adhesion, or any complication, and that then an operation would have been fairly free from danger. Tapping the cyst would have been as certainly fatal as the operation which was performed.

In the second case the patient, who was 50 years of age, had suffered much pain and had known that her abdomen was very large for more than two years before she sought advice. I operated on March 17th, 1899. The right ovary consisted of a large suppurating tumour deeply embedded in the broad ligament and pressing the ribs firmly upwards. Its walls were so fragile that it was quite impossible to prevent the escape of its contents at the side of the tapping cannula. At the same time the walls were so thick and so little pliable that the cyst could not be drawn out partially until the adhesions behind were separated. I made a very long incision in the abdominal wall; but there were many strong adhesions high up in the peritoneal cavity, and fouling of the peritoneum by the pus from the tumour was unavoidable during the necessary manipulations. When the bulk of the cyst was removed from the abdominal cavity, a deep enucleation from the broad ligament was necessary. The uterus was so completely atrophied and was drawn up so high on the tumour that it was mistaken for the end of the Fallopian tube and was removed inadvertently. I noticed this at once, and the stump of the uterus was properly secured after tying the uterine arteries as in a case of hysterectomy. The left ovary consisted of a cystic tumour with a good pedicle quite free from the uterus. There were some slight adhesions, but this tumour was easily removed. I carefully cleansed the peritoneum and drained the pelvis by means of a glass tube. At first the patient seemed as if she would do well, but she died from septicæmia on the eighth day. Extensive purulent inflammation of the peritoneum was found after death; the intestines were much distended and seemed in places as if they had been about to give way. The septic mischief must have developed from the pus spilt at the operation, or possibly a fresh dose of the poison escaped through the intestinal walls. The original cause of suppuration in the tumour had probably come from some adherent bowel. There can be no doubt that if an operation had been performed on this patient at an earlier date she would have had a very good chance of doing well.

In the third case the patient was 44 years of age and her first trouble was a difficulty in passing urine two years before I operated. A catheter was required then and frequently afterwards, but the tumour did not seem to have been detected and the patient did not notice any swelling. Two weeks before admission to the Samaritan Free Hospital the patient was living in Croydon and was knocked down by a cab there. Mr. G. Wale of that town was called in and at once discovered a tumour. It extended from the pelvis as high as the umbilicus and dragged up the uterus so far that the tumour was much below the level of the os uteri. There was tenderness in the right groin after the accident, and the temperature was above normal, sometimes as high as 101° F. I operated on Oct. 10th, 1899, and removed a multilocular cystic tumour of the left ovary which filled the pelvis and was firmly held there by suction and by adhesions. On the right side there was a very much swollen ovary. The fimbriated extremity of the Fallopian tube was occluded and the tube itself was much distended. I removed the ovary and tube with great difficulty without opening the tube. I could not find the vermiform appendix, but I suspected that it was buried in the adhesions from which I had removed the inflamed right tube and ovary. The parts removed seemed fairly clean, however, so I closed the abdomen, placing a drainage-tube in Douglas's pouch. This was removed after 24 hours, as the amount of fluid escaping through it was very slight and was quite sweet. Dr. Cuthbert Lockyer kindly examined the right Fallopian tube for me and got from it a pure culture of staphylococcus pyogenes aureus. For the first 10 days this patient seemed to do well, except that she was remarkably sleepless. On the second and third days her temperature rose to 103·2° and 102·6° respectively. It then gradually fell, and from the seventh day to the tenth the temperature was below 100° in the vagina. Up to the tenth day the condition of the abdomen seemed perfectly satisfactory, the bowels having been freely moved by enema on several occasions. The only difficulty was the persistent sleeplessness, for which it was necessary to give opiates. These secured the needed rest, but on the eleventh day the temperature again rose, the respiration became laboured, and there was slight expectoration. The weather was very cold and foggy, and I attributed the adverse symptoms to an inflammatory condition of the lungs. On the thirteenth day there was a suspicion of tenderness and fulness in the right groin; her temperature rose to 103·6°, and the patient died on the following day. At the post-mortem examination made by Dr. William C. Bosanquet it was found that the upper part of the abdomen was shut off from the lower part by adhesions. Below, there was considerable peritonitis, with pockets of purulent lymph amongst the coils of intestine and along the ascending colon. The lungs were intensely congested and of a dark purple colour, the lower lobes being in a condition of nearly solid œdema. The heart was very soft and flabby, but the valves were normal and there was no naked-eye evidence of fatty change. The vermiform appendix was bound down by old adhesions but was itself reported as healthy.

Probably in this case there was an inflammation in the situation from which I removed the right tube and ovary, and this was at first shut off by adhesions; the sleeplessness was, I presume, a result of absorption of poison; the enforced quiescence induced by opiates led to congestion of the lungs, and the peritonitis then made rapid progress. I think it is quite possible that until the lungs became congested there was no pus in the abdomen. The fact that there was no distinct sign of mischief in the abdomen for ten days is very unusual in my experience of ovariotomy, but an insidious onset of septic peritonitis in cases of inflammation of the vermiform appendix is not very unusual, and it is fairly certain either that I had not removed all the infected tissues or that fresh infection occurred later. During the operation I thought of making a small opening in the groin and passing a gauze drain down to the position from which I had removed the right ovary. Probably this would have saved the patient's life, but unfortunately I decided that I had removed all the infected parts. It is certain that if this patient had been operated upon before she was knocked down by the cab the conditions would have been much more favourable, but up to that time the presence of a tumour seems to have been overlooked.

In the case of a patient, aged 60 years, I explored the abdomen on Jan. 13th, 1897, and found that there were two malignant ovarian tumours with secondary deposits in the omentum. I closed the abdomen at once and sewed up the wound, without attempting to remove the tumours. On the next afternoon, at 3.30 o'clock, every sign was favourable, and the patient said that she was very comfortable. At about half-past four, after a quiet sleep, she woke up in a state of extreme restlessness, with a quick pulse and much difficulty of breathing. In my absence Mr. Alban Doran and Mr. Corrie Keep kindly did all they could for the patient, but she did not rally and she died somewhat suddenly at 8.20 P.M. At the post-mortem examination it was found that the tumours were attached to and invaded the walls of the intestine in several places, there being a mass of the size of a bantam's egg in the cæcum. The omentum also contained much malignant deposit. Dr. W. H. Allchin made the post-mortem examination and reported that the heart was "much dilated, soft, and flabby, and exhibited fatty invasion to an extreme degree, the left ventricular wall at places being almost replaced by fat."

There is little doubt that the cardiac condition was the cause of death. It is not possible to ascertain exactly the relations of an abdominal tumour in such a case as this without opening the peritoneal cavity. Probably no good could have been done in this case by operation at any time, unless perhaps at a very early stage, but the fatal issue would not have been likely to occur if the exploration had been

done earlier. I have only had one other fatal case at all comparable to this one, and that also was a case of advanced malignant disease.[4]

In the following case I diagnosed an inflamed ovarian tumour. The patient, who was 30 years of age, had been married 11 years and had borne six children. She had a soft, indefinite swelling to the left of the pelvis, pushing the uterus over to the right and rising nearly to the level of the umbilicus. She had been delivered of a dead child seven months before I saw her, and she dated her illness from that confinement. Throughout the 10 days during which the patient was in hospital before the operation there was only a very slight rise of temperature, 99·6° F. being the highest recorded. I opened the abdomen on June 25th, 1897, and found the contents of the pelvis so matted together that I had great difficulty in making out the relations of the viscera. After separating much omentum and opening many cavities containing fluid I succeeded in removing both ovaries and Fallopian tubes which were very much inflamed. The pelvis was drained by a glass tube and by iodoform gauze. Although there was a high temperature early in this case the abdominal condition progressed favourably and the abdomen remained soft and flat. On the fourth day the left parotid gland swelled. It was incised on the fifth day and discharged unhealthy pus until the patient died on the tenth day. After death numerous abscesses were found in the lungs and the left parotid gland was in a sloughy condition. The peritoneum showed neither lymph nor pus formation except in the pelvis, the site of the operation being shut off from the rest of the peritoneal cavity by adhesions. So far as I am able to speak definitely this was not a case of ovariotomy for new growth, but the operation was begun on the assumption that a tumour existed. The disease appeared to be an intense septic inflammation beginning in the Fallopian tubes and the infection was not completely removed.

Another fatal case is recorded here because I thought before the post-mortem examination that the mischief probably began in the ovary. The patient was a single woman, 34 years of age, who was sent to see me about the middle of October, 1899, by Mr. Isaac Coalbank of Teddington. She had complained of increasing constipation for over a year, but she did not consult Mr. Coalbank until, by the advice of a friend, she had taken some liver pills and so had made herself very much worse. I found a very hard growth in the right loin about the level of the umbilicus and an equally hard mass pressing low down in the pelvis on the right side. There was considerable intestinal distension, which made it impossible for me to estimate the size of these masses and whether they were connected or separate. The intestinal distension increased, and I admitted the patient into the hospital on Oct. 31st. A distended coil of intestine was then very obvious in the neighbourhood of the cæcum, and in spite of many lumps of fæces being removed from the lower bowel by enemata, this coil continued to increase in size rapidly until it was very tense and painful and stood out prominently from the rest of the abdomen, which was also distended but not to any great degree. I thought that the mischief depended on an ovarian new growth, and the existence of secondary deposits seemed probable. There was no prospect of my being able to do more than relieve the patient by the formation of an intestinal fistula, but surgical interference seemed necessary on account of the painful tension in the distended gut. On opening the abdomen in the right groin I found the omentum studded all over with new growth, and there were large masses in the pelvis. I opened the distended gut, which was the cæcum, and made a fistula. The obstruction was, however, only partially relieved; much fæces but very little flatus escaped; the general abdominal fulness did not go down, and the patient died early on the next morning. By post-mortem examination it was found that the malignant disease was much more extensive than I had thought. It appeared to have begun in the greater curvature of the stomach, where there was a considerable mass which had induced a malignant ulcer of the mucous membrane. The ovaries were normal, but large masses of secondary disease occupied the pelvis and were attached to the ovaries. The intestines and the peritoneum generally were affected at numerous points. It is remarkable that neither sickness nor vomiting was a prominent symptom in this case.

In one case there is room for doubt as to whether I removed an ovarian new growth or an abscess of the ovary. I was asked to see the patient in July, 1897, by Dr. J. W. Walker of Peckham Rye, and I diagnosed an inflamed left ovary and Fallopian tube. At this time it was not possible to say definitely that there was an enlargement of the ovary. The patient's general condition was good and she had recently come home from India where she had been a semi-invalid for many months. As complete rest had not been taken, except in a very intermittent way, I suggested that the patient should lie on her back for a couple of months and be treated by counter-irritants and warm douches. The inflammation diminished and all went well for six weeks. The patient was then suddenly seized with acute symptoms. I was out of town and when I returned a fortnight later I found that there was a large mass in the left side of the pelvis. It was acutely inflamed and the patient had much fever of a hectic type. Without further delay, on Sept. 29th, I removed the left ovary, which was of the size of a large cocoanut and contained one large abscess cavity. The mass was very firmly adherent to several coils of intestine above it. For a few hours the patient seemed better, but she was already in a septic condition. Towards night she began to rave, and she died very early on the following morning. If I had operated on this patient soon after I first saw her I should probably have performed an easy and safe operation. I think the case was one of acute infection of a chronically inflamed ovary.

I must mention one other case to complete the list of my fatal cases of ovariotomy and of those other fatal cases in which an ovarian tumour was or might have been diagnosed. I removed this patient's ovaries for chronic pain due, I believe, to the presence of a small fibroid tumour pressing on the left Fallopian tube. There was a small cyst of the right ovary which I had not diagnosed but which makes it necessary for me to mention the case here. The patient died from hæmorrhage 12 hours after the operation. The case does not invalidate my argument that ovarian tumours should be operated on early. In cases of death from hæmorrhage after ovariotomy I should not like to say that the surgeon has always been to blame, but there can be no doubt that in most cases a somewhat different disposition of the ligatures, or a little more force used in tying them, would have saved the patients' lives. I have been responsible for the treatment of secondary hæmorrhage twice in my own practice and once in that of a colleague during his absence, and I have had the good fortune to save two of these patients. Both are ignorant of the danger they passed through.

In a fourth case, not one of ovariotomy, I arrested secondary hæmorrhage and saved the patient's life for a time, but the details of the case have no bearing on this paper and will be published elsewhere. There are a few causes of death after ovariotomy which, like hæmorrhage, may be described as accidental and which are mostly preventable. If such causes of death be set aside, the cases which I have recorded in this paper clearly prove that delay in operating is the chief cause of fatal results in ovariotomy and also of unsatisfactory conditions arising in patients who recover from this operation. I would urge, therefore, that it is the duty of medical men whenever these tumours are diagnosed to advise their removal without any unavoidable delay. In conditions such as the presence of a uterine fibroid tumour in which there may be a reasonable prospect that the patient will not require an operation at all, there is often room for a difference of opinion as to whether an operation should be performed, and there are also cases of ovarian tumour in which an operation appears so formidable that it may not be considered wise to undertake it; but an ovarian tumour is sure to give trouble sooner or later, and it should therefo e be removed as soon as diagnosed if such treatment seems at all practicable. This is the only way in which patients can obtain the full benefit of the well-known advances which have been made in abdominal surgery.

[4] Some Cases of Malignant Disease Associated with Ovarian Tumours (Case 7), THE LANCET, June 17th, 1899, p. 1626.

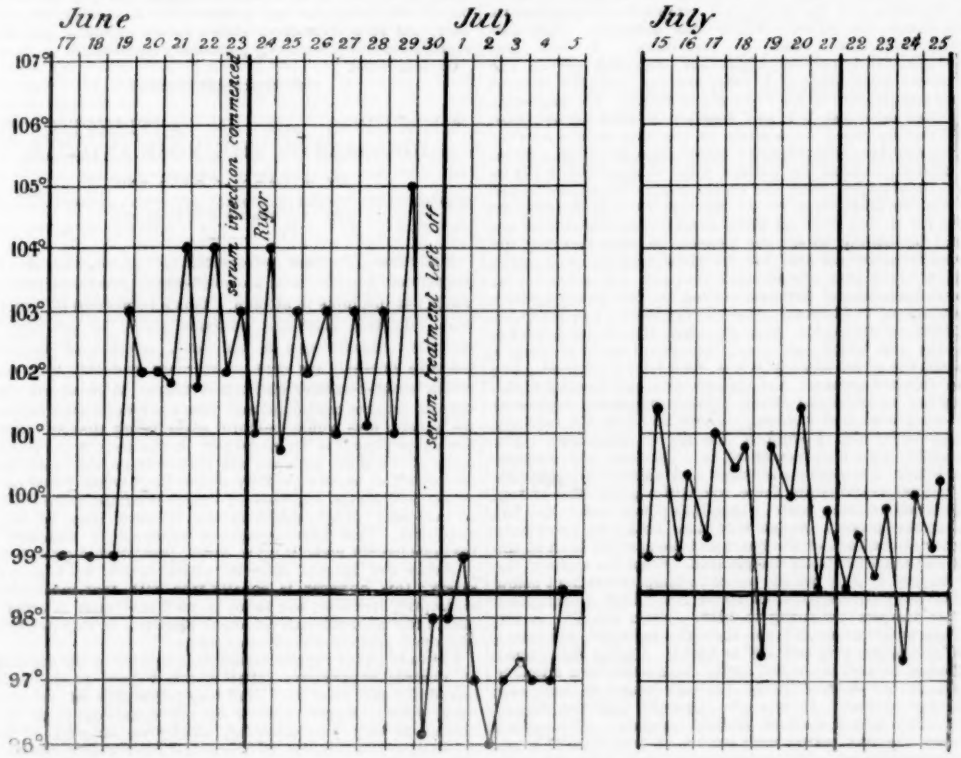
ADULTERATED GOLDEN SYRUP.—At the Newport County Petty Sessions held on Nov. 24th, a grocer of Pontymister, Monmouthshire, was summoned at the instance of the Monmouthshire County Council for selling golden syrup adulterated with glucose. Evidence showed that the "syrup" consisted of 20 per cent. of pure sucrose and 80 per cent. of glucose. The defendant was fined £20 and the costs of the court.

A CASE OF PUERPERAL SEPTICÆMIA TREATED BY ANTI-STREPTOCOCCIC SERUM,

COMPLICATED BY PULMONARY EMBOLISM, PERIMETRITIS, AND AXILLARY ABSCESS; RECOVERY.

BY B. T. READ, L.R.C.P. LOND., M.R.C.S. ENG.

THIS patient, a primipara, was confined on June 16th, 1900. The presentation was that of the first vertex position and the labour was not protracted. The placenta and membranes were complete and the perineum to all intents and purposes was intact. These points I wish to emphasise before going any further, as well as the fact that I did not examine the patient per vaginam to ascertain if there was any internal laceration, although the skin was untorn. Before leaving the room I told the patient, in her mother's presence, to keep her bed for ten days, not to sit up, and to use the bed-pan which I had lent her. Nothing appeared to be wrong until I called on the morning of the 20th, when I found that the thermometer which I had left on the previous night had registered 103° F. There was, moreover, a nasty odour from foul discharge perceptible on going into the room. The patient had a flushed face and a septic smell about her breath, and there were slight dyspnœa, cough, headache, nausea, and a pulse-rate of 100. There were a few moist sounds to be heard over the base of the left lung; she had had a cough or "cold" before her labour commenced. On examination I found that the perineum was torn through to a fraction of an inch from the anal orifice. The accompanying chart shows the temperature throughout. The patient on cross-examination gave a history of having left her bed on the morning of the 19th and of having used the night-stool because she did not care to use the bed-pan. Shortly afterwards she had felt cold, but there had been no rigor. As her bowels had been well opened I gave her half an ounce of Warburg's tincture and repeated it after two hours and prescribed an expectorant mixture. The vagina was douched out night and morning with tincture of iodine and permanganate of potassium alternately and the wound was dressed with creolin powder and gauze, &c. I decided to keep the wound as aseptic as I could and to have the operation of restoration of the perineum done later. On the morning of the 21st the dyspnœa had increased, the face was flushed, the countenance showed anxiety, and there were headache and nausea. The temperature was 101·8°, the pulse was 120, and the respirations were 32. On auscultation there was a murmur over the pulmonary artery at the cardiac base and another distinct murmur which was systolic in rhythm at the apex. At times the patient panted and moved her head from side to side in urgent distress. For several days she had these urgent oppressive attacks, but they passed off. The evening temperature was 104° and the general condition of the patient was much the same. I douched out the uterus with permanganate of potassium. The morning visit of the 22nd showed no change; the discharge continued to be offensive, the temperature was 101·8°, the pulse was 120, and the respirations were 36. The uterus was douched out with permanganate of potassium and tincture of iodine night and morning alternately until the 24th. The condition of the patient was much the same in the evening; the temperature was 104° and the pulse-rate remained the same. As this condition was a serious one I decided to telegraph for anti-streptococcic serum on the next morning (the 23rd). The patient had undoubtedly contracted septicæmia and as far as I could judge there were embolic deposits on the pulmonary and mitral valves, for in no other way could I account for the signs and symptoms which I had observed in her. It appeared to me that the emboli must be minute, and I was afraid that fresh deposits would take place. On the morning of the 23rd the anxiety, the dyspnœa, the flushing of the face, and the foul discharge continued, together with headache and nausea; the pulse was 130, the respirations were 36, and the temperature was 102°. I injected 10 cubic centimetres of the serum at



5 P.M., taking the usual antiseptic precautions. Ten minutes after the injection the patient complained of her head whirling round and of a feeling of sinking through the bed. This lasted for about half an hour and then she felt better; the headache and nausea had entirely disappeared and they did not recur until 12 hours had elapsed. On the following day I injected 10 cubic centimetres of serum at 7 A.M., 14 hours after the first injection. The aspect of the patient was much the same, the pulse was 140, the respirations were 40, and the temperature was 103°; 10 cubic centimetres of serum were injected at 7 P.M., and the injection was followed by the same sensations, with about the same interval as before and with the subsidence of the headache and the nausea. This happened each time after the injection of serum up to June 29th, when, unfortunately, I was disappointed in the serum not arriving as I had run short of it. On calling to see the patient on the 25th I learnt from her mother, who had been present at the time, that she had had a shivering fit on the previous night, when she shook from head to foot and her teeth chattered. The thermometer which I always left showed 104°. The temperature was 100·8° at 7 A.M., the respirations were 42, and the pulse was 133. I could find nothing to have caused this rigor. There were no additional signs in her chest, the murmurs remaining the same, and the abdominal symptoms of perimetritis were much the same. There was enteritis. The discharge had lost some of its fœtor. I now had the vagina douched out night and morning only. The noticeable good sign, if I may say so, was the descent of the temperature to 100·6° in the morning. The pulse-rate continued to be fast, but, as I observed afterwards, her pulse could not be relied upon alone as she was such a nervous woman and her ordinary pulse varied from 92 to 108. From the 26th to the 28th the patient went on as satisfactorily as could be expected until the serum supply failed me on the night of the 28th, when I used the last 10 cubic centimetres about 7 P.M. and there remained none for the morning of the 29th. On calling to see the patient on that morning the mother informed me that her daughter became so ill in the previous night that she thought that she was going to die, unconsciousness and delirium setting in. On going upstairs to see the patient I found her suffering from a bad headache and from nausea which came on when the serum injection was due and which continued throughout the day until I injected the serum again at 6 P.M. soon after its arrival. The same result happened, the nausea and the headache disappearing at the same time. The temperature registered 105° at 9 P.M. and suddenly fell to 96·4° on the morning of the 30th when I stopped the serum treatment. Her pulse-rate had now decreased to 115 and the respirations to 30. The septic discharge had entirely disappeared. On vaginal examination there was still a great deal of tenderness and swelling both in Douglas's pouch and in the left side of the pelvis. About this time both the pulmonary murmur at the base of the heart and the systolic bruit at the apex had almost entirely disappeared. From the night of the 30th to that of July 6th the patient's temperature kept below 99° and her pulse varied from 96 to 106. Then a change set in, her temperature rising to 101°. From the 7th to the 14th her temperature did not show any variation, remaining at 99° in the morning and 102° at night. During this period an abscess formed in the left axilla. There had been a tender nodule on the outer edge of the left breast without any mammary abscess. It was now apparent that the patient had drifted into a state of chronic pyæmia. Throughout this time she was taking nine ounces of brandy in 24 hours and champagne and fluid nourishment. I had her temperature taken every four hours from 9 P.M. on the 15th to 9 P.M. on the 24th. The abscess was opened on the 18th. The patient made a steady but slow recovery and her temperature remained normal on August 15th and I left off attending her on the 18th.

As regards the treatment in this case the following details may be given. During the early stage of the acute septicæmia the patient had half an ounce of Warburg's tincture on an empty stomach after the bowels had been relieved and this was repeated in two hours. That had not the slightest effect on her temperature. I followed this up with six ounces of brandy in 24 hours and two grains of hydrochlorate of quinine in pill form together with beef-tea and milk. She had 25 grains of trional on June 30th for insomnia. I was obliged to give her five grains of calomel on July 7th. It was not till July 12th that I had to give her half a grain of opium three times a day and to have her left hypogastric region painted with equal parts of liniment of iodine and tincture of iodine. When fresh symptoms of enteritis became more marked on July 14th I gave her opium pills which may have been the means of helping the absorption of all inflammatory products.

I take it that the serum treatment is conclusively proved to be good and trustworthy for the following reasons. The patient in this case had headache and nausea which entirely disappeared when the serum was used. If I was only a few minutes after my time in injecting the serum the head became worse and the feeling of nausea recurred. Then, again, as to the bad symptoms that set in at the time during which the patient was without the serum injection on June 29th from 7 A.M. to 6 P.M. (when the treatment was resumed), what was the result of this perseverance on that evening? It caused the sudden fall of the temperature from 105° to 96·4° on the following morning. The pulse had slowed down to 115, the respirations to 30—instead of 42—and the foul discharge had disappeared. A correspondent in THE LANCET[1] has recently cast a slur on the usefulness of the serum treatment and I should like to know whether these notes of mine will convince him. I for my part consider that I would have lost my patient without the serum treatment. I have never heard or read of another case of a lying-in woman, in or out of a hospital, getting out of bed on the third day for any purpose, for defecation or otherwise, and recovering from such a severe attack of puerperal septicæmia complicated by pulmonary embolism.

Odiham, Hants.

MERCUROL AS AN ANTISEPTIC IN DISEASES OF THE NOSE AND EAR.

BY R. LAKE, F.R.C.S. ENG.,

SURGEON TO THE ROYAL EAR HOSPITAL AND TO THE METROPOLITAN EAR, NOSE, AND THROAT HOSPITAL, ETC.

MERCUROL, for the information of those who are not acquainted with it, is a brownish-white powder, soluble in water but insoluble in alcohol. It is a compound of mercury with nucleinic acid and contains about 10 per cent. of mercury; therefore, a 5 per cent. solution of mercurol contains one-half per cent. of mercury and this in a form which is non-corrosive and non-irritant. It is at the same time an organic compound and does not precipitate albumin; the general idea which mercurol gives being that at one and the same time it is an antiseptic in the usually understood sense of the word and will act indirectly on the protoplasm of the nuclei, more especially of the large white blood-cells, as the phagocytes, and thereby enable them the more readily to overcome micro-organisms and destroy them in larger quantities. One disadvantage of solutions of mercurol is that one cannot make it up in large quantities, a week being probably the longest time in which it can be kept with safety; this, however, is equally true with that most useful antiseptic, formalin, but there is no doubt that in order to obtain the most efficient action of mercurol it requires to be employed, like chlorine, freshly made.

I have not kept regular statistical accounts of all the cases of chronic suppurative otitis which I have treated with mercurol; and even if I had the probability of mercurol being found largely superior to other antiseptics in this disease is very problematical, chiefly on account of the mechanical obstructions to the antiseptic reaching the parts affected. In acute suppurative otitis, however, the conditions are very different. I have used it in three cases immediately after incising the membrana tympani. It should, of course, be used to disinfect the canal previously to the operation where it is to be used afterwards as the antiseptic. The three cases were all cured within ten days, the most rapid cure being four days.

CASE 1.—The patient, aged 27 years, came to the Royal Ear Hospital suffering from keratosis obturans. This required a long and tedious process of removal, which, however, when effected, as it was somewhat suddenly, set up an acute otitis media. The membrane became red and bulging and there was at the same time a small anterior perforation through which pus extruded. An incision was made over the swelling and the middle ear was irrigated with 2½ per cent. of mercurol. This solution was used to irrigate the

[1] "Puerperal Sepsis," by R. P. Ranken Lyle, M.D. Dub., THE LANCET, Sept. 29th, 1900, p. 925.

ear three times daily and a complete recovery was obtained in ten days.

It must be said here that in neither of the acute cases was there left any impairment of the hearing. As a means of treating acute suppurative otitis media (after perforation has occurred) I can very highly recommend the injection into the cavity of the middle ear by means of the Eustachian canal of a small quantity of a 5 per cent. solution of mercurol. By such treatment a more rapid and effective cure is usually gained than by any other. its only disadvantage being that it almost of necessity should be left to the specialist to carry out. That one does obtain extremely good results from mercurol in chronic suppurative otitis media cannot be denied, but at the same time for my own part I would not, as before stated, consider this drug to be to any extent superior to, say, perchloride of mercury or carbolic acid. The following may be taken as an example of the treatment of chronic otitis media.

CASE 2.—A woman, aged 31 years, had suffered from discharge from both ears since, at the age of six years, she had had scarlet fever. The discharge was very offensive. On the right side there was a perforation in the posterior superior quadrant and one also in the anterior inferior, while on the left side there was a sinus leading into the antrum with a small posterior perforation on a level with the tip of the handle. 5 per cent. of mercurol was ordered three times daily as an injection. At the end of six weeks the discharge on the left side had entirely ceased and was reduced to an inodorous, clear, watery discharge on the right side. The mercurol solution was then reduced to 2½ per cent. and the patient was seen again in three weeks' time, when the discharge had entirely ceased on the right side.

As an example of the use of mercurol in diffuse inflammation of the external meatus the following case may be mentioned.

CASE 3.—A man, apparently of gouty habit, came to me complaining of discharge from one ear. The meatus was entirely occluded by diffuse swelling; the discharge was thin and very purulent—that is to say, there was acute gouty affection (eczema) of the ear. He was given mercurol in a 5 per cent. solution and immediately obtained the greatest relief from the irritation. The swelling in the canal disappeared extremely rapidly, and, what is much more important, the mercurol seemed in this instance to have effectually prevented contraction.

The following is an instance of the use of mercurol in chronic suppuration of the maxillary antrum.

CASE 4.—The patient was a man, aged 38 years, who was under the care of Mr. E. T. M. Tunnicliffe who brought him to me with the following history. The patient had had a nasal discharge for six months from the left side which had all along been offensive at times. On pressure within the nostril offensive pus could be evacuated by the patient. On examination of the left nose a large projection was seen below the inferior turbinated bone. This was soft and elastic, giving a feeling of a dense wall cyst, from which pus could be made to exude at the posterior part if firm pressure were applied. This was incised and some drachms of extremely offensive pus were evacuated, and on examination the abscess cavity was found to be continuous with the maxillary sinus, the lower part of the internal bony wall of the antrum being entirely absorbed. The cavity was irrigated with 5 per cent. of mercurol and was packed with iodoform gauze. In three weeks' time there was practically no discharge and absolutely no smell; the latter, I was informed, had never reappeared after the first washing with mercurol. The percentage of mercurol was now reduced to 2½, which was kept up as a matter of precaution for another three weeks, when the opening was allowed to close, perfect cure having been obtained.

CASE 5.—The patient, a female, had suffered from chronic suppuration of the maxillary antrum for at least 18 months. The antrum was opened through the alveolus on the right side at the side of the first molar which had been removed some time previously. There was a fair amount of pus in the antrum and the lining membrane was much thickened as detected by the probe. Irrigation with mercurol (1 per cent.) was carried out regularly twice daily with the result that there was a complete cure in six weeks.

I have used mercurol (2 per cent.) twice after operations, one being a double ossiculectomy and the other an operation for opening the frontal sinus. The wounds in both cases remained in an absolutely satisfactory and aseptic condition, though one would frequently find it necessary to change from so bland and unirritating an antiseptic to one having the strongly caustic properties of 5 per cent. of carbolic acid, especially where much ulceration remains, the tendency of which to secrete it is frequently desirable to overcome. I have also irrigated the frontal sinus with it *vid* the infundibulum with satisfactory results, but as these cases have been amongst hospital patients and I have been unable to see them sufficiently often I cannot attribute a cure to mercurol in this respect, though the general impression I derived was that had I been able to use it sufficiently often, say daily, it would have given better results.

With regard to chronic suppuration of the middle ear I have only quoted one case. From the small number of cases in which the drug was systematically used the general results may be apparently slightly above the average obtained by other antiseptics. But, as before remarked, it is the anatomical and mechanical obstruction to the penetration of any particular remedy to the seat of disease that renders this ailment so intractable. So to claim for mercurol any peculiar and specific action in this disease would be, in my opinion, absurd. My general impression is that mercurol is the least irritating efficient antiseptic with which I am acquainted, being possessed of properties which commend it highly, especially as a lotion for the irrigation of cavities such as the maxillary sinus.

Harley-street, W.

A CASE OF MORPHIA-POISONING TREATED BY ATROPINE.

BY EDWARD GROUND, M.D. CANTAB.

As there is a certain difference of opinion among authorities on toxicology as to the value of atropine in morphia-poisoning I think the following case may possibly be of interest to readers of THE LANCET.

A few weeks ago, at about 2 P.M., I was summoned to see a man, aged 61 years. His wife told me that he had been in bed for two or three days suffering from an attack of influenza and that shortly before she sent for me he had been seized with faintness which alarmed her very much. I found him in bed, looking rather sleepy (he had had a good dinner); his face was flushed, his pulse was quick (about 100), and his pupils were contracted. On being questioned he strenuously denied having taken any opiate and his wife who had been with him while he was having his dinner said she was quite sure that he could not have taken any without her knowledge. I was sent for again in a hurry at 5 P.M., an empty one-ounce bottle, labeled "Liq. morph. hydrochlor.," having been found in his room. When I arrived (at 5.30) I found him very drowsy and looking very pale, sweating profusely, and with very contracted pupils. He then admitted that he had taken one ounce of solution of hydrochlorate of morphia in his brandy-and-soda at dinner-time, under the impression that he was taking two grains of morphia. After a little difficulty I persuaded him to take an emetic, but he only brought up a little tea which he had taken shortly before. I then gave him a hypodermic injection of a thirty-third of a grain of sulphate of atropia and three grains of permanganate of potash in pill every three hours, with the idea of oxidising any unabsorbed morphia that might remain in the intestinal canal. At 7 P.M., although he could only be roused with difficulty, his general condition had undergone a marked improvement. The pallor had given place to a distinct flushing of the face, the profuse sweating had stopped and the skin was dry, the pupils were less contracted, and the pulse had improved in tone and in volume. The injection was repeated then, and again at 9.30 P.M., when he was quite insensible but otherwise about the same. At 11 P.M. another injection of atropine was given, with one-thirtieth of a grain of sulphate of strychnia, as his pulse was inclined to fail. He remained quite insensible, but his breathing never became stertorous, until about 12.30 A.M. when, after vigorous shaking, he began slightly to raise his eyelids and to show signs of returning consciousness. At 4.30 A.M., after constant shakings, moving of his arms and legs, with artificial respiration, he became conscious and gradually recovered.

A great many cases of opium- and morphia-poisoning successfully treated with atropine have been reported in which the dose of poison was very much larger than in this case. A case has been described by Dr. D. T. Playfair,[1] in

[1] THE LANCET, August 27th, 1898, p. 545.

which a woman, aged 37 years, took 30 grains of acetate of morphia, a fact which was not discovered until three hours afterwards. Four injections of atropine, each of one-fortieth of a grain, were given, but the recovery of the patient was attributed to the prolonged use of oxygen gas with artificial respiration, all natural respiratory movements having ceased for several hours. Mr. Percy Pope [2] records a case of recovery in a girl, aged 19 years, after a hypodermic injection of 12 grains of morphia. The treatment consisted in the administration of four grains of atropine in doses of one-twentieth of a grain at short intervals during 12 hours and in artificial respiration, strong coffee, and attempts to rouse the patient. Cruse describes the case of an infant, one week old, who was accidentally poisoned by a grain of morphine. The comatose condition that resulted remained unaffected by various treatments for several hours until a quarter of a grain of atropine was administered and the dose repeated after an interval of half an hour. Recovery was complete in 38 hours and no unpleasant symptoms attended the administration of such large doses of atropine. From the marked improvement in my patient I should be inclined to regard atropine as a valuable remedy in opium-poisoning; but there appears to be one difficulty, and that is to know when the limit of safety has been reached with regard to the amount of atropine to be used. The action of morphia and atropine is not exactly antagonistic, the former acting centrally and the latter peripherally. According to Dr. J. Dixon Mann, "Morphia slows the heart's action by excitation of the vagus at its origin in the brain; atropine quickens the heart by paralysing the terminations of the vagi and the inhibitory ganglia in the heart. ..... Opium acting centrally contracts the pupils; atropine paralyses the terminals of the oculo-motor nerves. Opium causes sweating by stimulating the central nerve apparatus concerned; atropine arrests it by paralysing the nerve terminals in the sweat glands." Ultimately, however, the effects of the two poisons become mutual, both paralysing the motor and sensory nerves, atropine especially paralysing the heart and opium the respiratory apparatus. Some caution, therefore, is required in using the antidote. Dr. A. P. Luff recommends that it be given in frequently repeated doses until half a grain has been given, and this should provide a fair margin of safety. My patient took about four and one-third grains of morphia which is not a very large dose, and one-eighth of a grain of atropine was given as an antidote, which, I believe, contributed largely to his recovery. There is one point that is rather impressed on the mind in considering this question and that is that however large the dose of opium or morphia may be there need be no despair, with the help of atropine, oxygen, and artificial respiration, of rescuing from death the person poisoned even after the poison has become thoroughly absorbed.

Maidstone.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

A CASE OF ARSENICAL BEER POISONING.

BY J. HAROLD BAILEY, M.B. VICT.

ON Oct. 9th, 1900, I was called in to attend a married woman, aged 41 years, residing in Pendleton, she having slipped and sprained her left ankle. Rest and the application of lead and opium lotion to the injured joint were prescribed. The swelling around the joint subsided and the pain, which was severe, abated somewhat, but at the end of a week the patient began to complain of pains and tingling in the left foot, and she was unable to stand upright and was obliged to remain altogether in bed. Cramps in the calves of both legs were next complained of, and the feet and legs became exceedingly painful to pressure on any part of them; she also complained of the weight of the bed-clothes and of being unable to sleep at night owing to the intensity of the pains. After another week the patient noticed that her hands were becoming affected, saying that they felt numb to the touch, though painful sensations like "pins and needles" were present. She could not use her hands, moving the fingers with difficulty. Her appetite began to fail, the tongue became slightly coated, and vomiting of yellowish bile occasionally occurred. Before being confined to bed the patient had been accustomed to have beer for supper and she admitted having taken a glass or two since. Hearing late on Nov. 20th that Dr. E. S. Reynolds had detected arsenic in beer in Manchester I called at the patient's house on the morning of Nov. 21st and sent out for a jug of the beer which she was in the habit of drinking; this was obtained from the shop whence she had been getting her beer, and on its being analysed by Mr. William Kirkby, F.L.S., of Owens College, it was found to contain 0·14 grain per gallon of As_4O_6. A sample of urine from the patient failed to show the presence of arsenic, though in the case of another patient of mine who had drunk the same beer and was suffering from symptoms of arsenical poisoning the urine showed a faint trace of arsenic. The condition of the patient became gradually worse, the weakness of the limbs increasing, and there being in addition considerable general wasting. On making a detailed examination on Nov. 29th the following state of affairs was noticed. The patient lay on her right side in a drowsy, heavy condition, with the eyes half open and the knees drawn up. She opened her eyes slowly when asked to do so. She could recognise me, mentioning my name. She complained of her head, saying that it felt as though drums were playing in the street. Dark brownish pigmentation of the skin was present on the neck, the axillæ, the abdomen, the thighs, and the legs. There was flaky desquamation of the skin over the lower part of the abdomen. Over the calves of the legs the skin was roughened and desquamating. The legs and hands could be moved slightly without the patient being roused, but on making more extended movements she complained of pain. The left foot was dropped and the skin was thickened; on the right foot keratosis was well marked, especially over the heel. The patellar reflex was absent on both sides. The tongue was red and moist, the pupils reacted readily to light, the eyes were somewhat watery, but there was no nasal discharge. The heart sounds were regular but feeble, the first sound was hardly to be detected. The pulse was 100 per minute and exceedingly feeble. The respirations were 24 per minute; there was slight movement of the diaphragm. The chest moved as a whole without much lateral expansion. The temperature was normal. During the five days ending on Dec. 4th the patient's condition remained much the same though more nourishment was taken and the comatose state was not so well marked.

Pendleton.

[2] THE LANCET, March 17th, 1894, p. 669.

SYMPTOMS OF ARSENICAL POISONING PRODUCED IN A YOUNG CHILD BY DRINKING BEER.

BY JOHN BROWN, M.D. VICT., D.P.H.,
MEDICAL OFFICER OF HEALTH OF BACUP.

DURING the recent epidemic of peripheral neuritis, now proved to have arisen from the drinking of arsenicated beer, I have seen no reference to any cases observed in very young children. Such must be of very rare occurrence, as it is to be hoped that parents do not generally allow young children to drink beer. Moreover, if a case occurred in a child it would most probably not be easily detected, as it is a condition one would hardly expect in a young child. On Nov. 27th, however, whilst attending a patient affected with peripheral neuritis my suspicions were aroused to the case which I now record, and I was led to suspect that the child was suffering from arsenical beer poisoning by the fact that the father had peripheral neuritis. Dr. Kelynack, to whom, with Mr. Kirkby, is due the credit of being the first to announce to the profession the true source of the arsenic, very kindly came to Bacup to see the patient with me. He went over the case very thoroughly and expressed his opinion that it was undoubtedly a distinct but mild case of peripheral neuritis due to arsenical beer. The case being unique I have made a few notes briefly recording the more important features.

The patient was a bonny-looking little girl, aged two years. She had been unwell for some days, suffering from pains in

the feet, legs, and arms which were thought to be rheumatic pains. Evidently her feet felt hot and uncomfortable, for she wanted her shoes always off. The child was too young to describe her subjective symptoms, so that it was necessary to rely on the objective ones. Her face was flushed, her eyes were watery, and there was a slight running from her nose. The cutaneous symptoms were as follows. There was no pigmentation of the face, neck, thorax, axillæ, abdomen, or groin. Erythematous areas existed over the arms and forearms in the region of the elbows, being most marked on the extensor surfaces. The palms of the hands were red, especially over the thenar and hypothenar eminences and about the tips of the fingers. In the lower extremities there was marked erythema over both knees, and on the right side above the patella there were several distinct, irregular, brownish patches, evidently due to pigmentation in the superficial layers of the skin and not arising from effusion of blood. There were similar pigmented spots above the left knee, but neither so well-marked nor so extensive. There was erythema of the soles of the feet and the toes, with a distinct border to the erythema along both sides of the feet and around the heels. As the child sat on the lap of a relative the feet looked "dropped" as if the extensors were paretic, but there was no distinct paralysis. There were no impairment of the tactile sensation, no muscular hyperæsthesia, no plantar reflex, and no dorsal extension of the toe; the knee-jerks were absent.

Remarks.—The child's father keeps a public-house, and although so young she was accustomed to get little "sups" of beer from the kindly disposed customers at the bar. I have carefully tested samples of the beer and have found arsenic present. In four distinct cases of peripheral neuritis occurring in Bacup I have examined the beer and have found arsenic in each case. Out of 14 different samples of beer no less than 11 showed distinct traces of arsenic. No doubt many cases of peripheral neuritis due to arsenicated beer have been overlooked.

Bacup.

NOTES OF TWO CASES OF FOREIGN BODY IN THE AIR-PASSAGES.

BY E. F. SYRETT, M.D. DURH., M.R.C.S. ENG.

THE following two cases occurring within a few months of one another are of interest on account of the entire absence of urgent symptoms, and the fact that in neither case was the presence of a foreign body suspected.

CASE 1.—On May 12th, 1900, I was called to see a boy, aged 13 years, who, I was told, had been ailing for three weeks. The symptoms complained of were cough, fever, and pain over the base of the right lung. His temperature was 103° F. and his cheeks were flushed. Examination of the chest showed a markedly impaired percussion note over the whole of the right lung. The vesicular murmur was deficient, and at the apex of the lung, both behind and in front, moist sounds were heard. The left lung showed nothing but increased breath sounds. The sputum was abundant and blood-stained. Cough was frequent, but there was nothing remarkable in its character. The patient was kept in bed for two weeks and was allowed to get up when the temperature fell to normal. The physical signs remained unaltered and the cough continued, but the patient seemed quite bright and well. I continued to see him about once a week during the next two months, his condition remaining unaltered. On July 26th, whilst trying to pull a stick away from a large dog he had a violent attack of coughing and he coughed up a small smooth pebble a little larger than a cherry-stone. On cross-examining the mother she said that at the time the cough, &c., commenced the boy while playing football had put the stone into his mouth "to keep his wind." On returning from the game he told her that he had swallowed the stone, but beyond an attack of coughing at the time he had felt no ill-effects. The symptoms which supervened she attributed to catching cold during the game. The stone was, therefore, retained in the right bronchus just 13 weeks.

CASE 2.—This patient, a married woman, aged 33 years, came to me on account of toothache on Sept. 12th, 1900. I sent her to a dentist and a lower wisdom tooth was extracted on the next day under gas. On the 14th she came to me with complaints of cough and hoarseness. She said that on recovery from the gas her lungs felt blocked up, and she had been coughing considerably all night. On examination of her chest I found universal rhonchus, with a few moist sounds, both lungs being equally affected. There was no dulness. She was expectorating blood-stained sputum. I advised her to go to bed and an elaborate treatment for bronchitis was carried out. In spite of everything the bad symptoms increased. On the 25th, 12 days after the extraction of the tooth I called to see the patient, and she told me that she was better. A violent fit of coughing had expelled the wisdom tooth, which I at once recognised as the old offender.

Nayland, Colchester.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, VICTORIA PARK, E.

A CASE OF ABSCESS OF THE LIVER DIAGNOSED BY THE PRESENCE IN THE URINE OF CRYSTALS OF CHOLESTERIN, LEUCIN, AND TYROSIN.

(Under the care of Dr. VINCENT DORMER HARRIS and Mr. J. F. C. H. MACREADY.)

THE association in the following case of the presence of leucin, tyrosin, and cholesterin in the urine with impairment of the percussion note over the lower part of the right lung, was strongly suggestive of some active process in the liver. We are not aware that it has been noticed that abscess of the liver is often accompanied by the presence of these abnormal constituents in the urine. It is not improbable that they might be found in small quantities in many acute morbid conditions of the liver if they were specially sought for. For the notes of the case we are indebted to Dr. J. G. Emanuel and Dr. E. W. Martin.

A sailor, aged 48 years, was admitted into the City of London Hospital for Diseases of the Chest, Victoria-park, E., under the care of Dr. Vincent D. Harris on Jan. 15th, 1900, complaining of pain in the right side of the chest and of having lost flesh. The symptoms had started insidiously and without any obvious cause some three months previously and had been getting gradually worse up to the date of his admission. In October, 1899, the patient's weight was 12 st. 7 lb., whilst on his admission he only weighed 9 st. 10 lb.—i.e., the patient had lost nearly three stones in three months. The pain on the right side was not severe, but it was constantly present and of a gnawing character, and was evidently telling very seriously on the patient's general constitution. The pain was not affected in any way by eating, by respiratory movements, or by exertion. It was localised to the right side of the chest, over a somewhat indefinite area, corresponding to the lower part of the right axilla. There was no tenderness of the painful area even on deep pressure.

The previous history showed uninterrupted good health till the year 1896, when the patient was laid up in South America for four weeks with a severe attack of dysentery. Twelve months or so after this, when in England, he had another less severe attack, and again in 1898, whilst in South Africa, he was laid up, this time for three weeks with dysentery. In each attack diarrhœa with blood in the stools was a prominent symptom; in the intervals between these attacks the patient's health had been excellent and he had enjoyed perfect health since the last attack in 1898, up till three months before his admission into hospital in 1900.

On examination the patient was found to be a middle-aged man, emaciated, and with a somewhat ashy-grey complexion, lying comfortably in bed in any posture. He had a rather cachectic appearance, suggestive of malignant disease, but otherwise he presented no obvious morbid appearance. The

temperature, pulse, and respiration were normal. Examination of the heart revealed nothing abnormal, and he had no shortness of breath even on exertion. His lungs were free from abnormal signs, with the exception that the percussion note at the right base was impaired below the angle of the scapula, and over this area the breath sounds were weak (they were distinctly audible, however, as far as the extreme base), and tactile vocal fremitus and vocal resonance were diminished. The percussion note and entry of air over the right base in the axilla and anteriorly were good. He had an occasional slight cough, accompanied by a very little mucoid expectoration. His tongue was clean, the appetite was good, the bowels were regular, and he had no pain or discomfort of any kind with his food. The abdomen was readily palpable and there was no enlargement of the liver or spleen. The upper border of the liver dulness corresponded to the fifth rib in the right vertical nipple line and to the seventh rib in the right axilla. The lower border of the liver dulness corresponded to the costal margin in the right vertical nipple line. The urine was acid, of specific gravity 1020, contained a very faint trace of albumin, and gave the blood reaction with cronic ether and guaiacum. On microscopic examination it was found to contain a number of red blood corpuscles and crystals of leucin, tyrosin, and cholesterin, the latter in considerable abundance. The patient slept well and exhibited no abnormal symptoms or physical signs suggestive of cerebral disease of any kind.

In picking out the salient features of this case for the purpose of diagnosis the following appeared to be the most important points: (1) the remarkable condition of the urine; (2) the signs of slight pressure on the lower lobe of the right lung; (3) the history of dysentery; and (4) the patient's general condition, indicative of some serious lesion. The condition of the urine did not seem to be associated with any actual disease of the kidney or bladder, as there were no signs of casts, no marked diminution in the elimination of urea, and no increased frequency of micturition. On the other hand, the condition of the urine immediately brought to mind the character of the urine in cases of acute yellow atrophy of the liver, and it suggested very forcibly some destructive process going on in the liver. This, taken together with the history of dysentery and the signs of pressure on the lower lobe of the right lung, suggested the possibility of the presence of a dysenteric abscess of the liver, and with this thought constantly in mind the patient was kept under careful observation for several weeks. His condition, however, did not seem to alter in any appreciable degree. His weight remained stationary and his temperature slightly subnormal, he ate and slept well, and he was able to walk about in the grounds of the hospital with the convalescent patients. He always, however, complained that the pain in his right side "got no better" and that he became easily tired. Moreover, his appearance did not change and he always gave the impression of having something seriously amiss. His physical signs remained absolutely unaltered and he was regularly examined at least once a week with a view to finding some change in the physical signs. The character of the urine also remained the same as on admission excepting that the trace of blood found on admission was often not detectable by the chemical tests, and the faint trace of albumin was not always present. Crystals, however, of leucin, tyrosin, and cholesterin were present at every examination, and for some weeks the urine was examined microscopically every other day.

Towards the end of March, ten weeks after the patient's admission, some slight œdema over the lower ribs in the right axilla was discovered, and then for the first time it was noticed that there was some bulging of the ribs at this slightly œdematous part. Accordingly, on March 27th into the centre of this area (in the seventh space in the mid-axillary line) an exploring needle was inserted and a syringeful of chocolate-coloured pus was withdrawn. The pus was quite odourless and microscopically consisted of pus cells, granular débris, and fatty globules; no amœbæ were found on the warm stage of the microscope. Three days later (March 30th) Dr. Martin anæsthetised the patient, while Dr. Emanuel resected part of the eighth rib in the right mid-axilla. After the rib was removed a thick membrane presented, and this was taken to be the pleura, diaphragm, and peritoneum fused together by chronic inflammation. Into this membrane an exploratory needle was inserted and chocolate-coloured pus was again withdrawn. The membrane was then incised and a little more than a pint of this odourless chocolate-coloured pus escaped. A finger inserted into the wound passed into a large abscess cavity in the liver, with soft velvety walls, freely bleeding after any manipulation. A drainage-tube was inserted and dressings were applied. Subsequently the wound was dressed daily. The discharge rapidly diminished, the tube was gradually shortened, and the patient made an uneventful recovery, leaving the hospital on May 24th perfectly well in every respect and weighing 11 st. 5 lb. (being a gain of 1 st. 9 lb. in the seven weeks following the operation). The patient reported himself two months after his discharge and said he was perfectly well and about to sail for China. Very soon after the evacuation of the pus the leucin, tyrosin, and cholesterin crystals disappeared from the urine and the urine became quite normal.

Remarks by Dr. EMANUEL *and* Dr. MARTIN.—We venture to believe that this case is worthy of publication on account of the following facts: 1. The presence of cholesterin in urine is rare and its association with leucin and tyrosin is still more uncommon. These three constituents were constantly present in the urine of the above case for ten weeks to our knowledge, but disappeared as soon as the hepatic abscess was drained. These facts evidently therefore justified our opinion in associating their presence with some destructive process going on in the liver. 2. The liver abscess on the patient's admission was deeply situated and it gradually pointed to the thoracic wall, because on four different occasions during the ten weeks before the operation an exploring needle was inserted into the chest without result, two explorations being made in the back in the ninth space in the scapular line, and the other two explorations being made in the right axilla in the same space and at the same spot, where the exploration made subsequently on March 27th discovered the pus. 3. The case exemplifies the fact that a chronic abscess of the liver may be associated with no fever—the temperature throughout was subnormal. 4. There was an interval of two years between the last attack of dysentery and the first symptoms of the liver abscess.

CONNAUGHT HOSPITAL, ALDERSHOT.

CASE OF ACUTE PNEUMONIA WITH HYPERPYREXIA; BENEFICIAL EFFECT OF OXYGEN.

(Under the care of Mr. A. ALISON BRADBURNE, Civil Surgeon, Army Medical Service.)

THE exact value of oxygen in the treatment of pneumonia cannot be said to be fully determined. That it is useful for sudden and severe attacks of dyspnœa is now generally acknowledged, but that it is of any real value in cutting short the attack or reducing the temperature is more than doubtful. The ordinary methods of administering the gas are by no means satisfactory and it is not probable that the percentage of oxygen in the inspired air is very much increased.

A man, aged 24 years, was admitted into the Connaught Hospital at 12 noon on May 29th, 1900. The temperature was 106° F., the pulse was 112, and the respirations were 38. There were physical signs of pneumonia commencing in the right lung and crepitations were heard from the apex to the base; in front and behind. Slight mental excitement and tremors were present. An effervescing cough mixture was prescribed; also to endeavour to reduce the temperature powders containing a grain each of quinine and phenacetin were given every half-hour. He was also sponged every half-hour. When seen two hours after admission (2 P.M.) the temperature, despite the treatment, remained the same, and the patient had vomited as soon as he was given the medicine and powders; they were consequently discontinued and reliance was placed on cold sponging, which by 2 A.M. on the following morning had reduced the temperature to 101·4°. When seen at 10 A.M. on the 30th the temperature stood at 105·6° and rose, despite sponging, to 105·8° by 2 P.M., at which hour the patient was given a cold pack (made with tepid water), in which he was left for an hour. At 4 P.M., the temperature being still 105·6°, five grains of phenacetin were given in hot whisky and water. This was followed by a gradual decline to 101·4°, which was reached at 10 P.M., when the temperature again commenced to rise. On the 31st the temperature at 6 A.M. had reached 103·8°,

for which five grains of phenacetin were given, but this time it was followed by a rise to 105·8°. It only seemed possible to keep the temperature stationary for about four hours at 103·8°, then another five grains caused a small drop which lasted exactly an hour, to be followed by a more intense rise to 106·2°, which was registered at 4 P.M. The thermometer was used every half-hour and when it was found to register this height another five grains of phenacetin were given, and this, combined with the steady sponging which all along had been used in conjunction with the antipyretic, effected a reduction in the temperature to 102·4°. The mental excitement noted on admission had passed into the stage of active delirium, necessitating careful watching. On June 1st the temperature at 6 A.M. stood at 104·2°. The pulse was 120 and the respirations were 48. An enema which acted well was given. The chest symptoms were following the usual course, but a roughened sound over the pulmonary area had developed, indicating some pleuro-pericarditis on the left side. This luckily cleared up as the disease progressed and caused no trouble. The pulse remained fairly strong, despite the numerous doses of phenacetin, to counteract which and to assist the heart 15 minims of tincture of digitalis with five minims of solution of strychnine and five minims of diluted nitro-hydrochloric acid had been given every four hours; four ounces of brandy were also given during the 24 hours. Another attempt to give quinine was tried in a mixture with 10 minims of tincture of opium, but, as on previous occasions, it was immediately rejected. On the 2nd at 2 A.M. the thermometer registered 105·8° which phenacetin successfully reduced to 101·8°, and as the stomach was beginning to be irritable all medicine by the mouth was stopped. The milk, which the patient was taking fairly well, was partially peptonised, and by these measures all vomiting ceased. To replace the medicine and to assist the respirations, though the signs of cyanosis were very slight, inhalations of oxygen for periods of ten minutes at intervals of half an hour were commenced, and when seen 24 hours later the improvement, especially in the state of the pulse, was most gratifying, even though for that period the patient had taken no medicine whatever. To assist liquefaction of the bronchial secretion poultices were applied along with the use of the steam kettle containing compound tincture of benzoin and turpentine. The bowels had acted once and the urine had been passed involuntarily. During the night of the 2nd and the morning of the 3rd the temperature stood steadily between 103° and 104°. Unfortunately, the oxygen gave out about midday, after 24 hours' use, and the tubes which had been telegraphed for did not arrive until late in the afternoon, when it was again resumed. To make up for the absence of oxygen and to anticipate the effects of a hoped-for and expected crisis hypodermic injections of three minims of solution of strychnine every four hours alternated with five minims of ether were given. At 10 P.M. the crisis commenced, the temperature falling in one and a half hours to 99°. Naturally such a rapid fall necessitated strong stimulating remedies. The patient was given an enema containing brandy, digitalis, and strychnine, which was returned, but a second enema was retained; also hypodermic injections of ether and strychnine were administered. He passed a restless night, but the pulse, which had nearly failed, recovered itself by next morning. A source of trouble was the patient's refusal to take nourishment by the mouth, so rectal feeding was therefore resorted to and continued during the night until midnight, when he asked for something to drink, so enabling the nurse to give him some milk. On the 4th the patient was decidedly better and the hypodermic injections were stopped, being replaced by tincture of strophanthus. There was no vomiting and the bowels acted well. The oxygen was also stopped. He was still delirious, but was not troublesome. The temperature, instead of remaining down, as was hoped, rose to 101°, and by midday it had reached 103°, but from this point it steadily fell to normal, which it reached on the evening of the 6th. On the 5th 10 grains of sulphonal were given to enable the patient to get some rest and to quiet his delirium, and this was followed by a very satisfactory period of what looked like natural sleep. There was very little expectoration, a feature which marked the whole course of the disease, though at this stage moist râles could be heard all over his right chest. By the evening of the 6th the temperature had dropped to normal, and remained so until the 11th, when it rose to 99·8°, falling to 98·4° on the same day, which was caused most probably by the great heat experienced that week. After so much delirium and hyperpyrexia it was not to be wondered at that the patient should exhibit some signs of mental weakness for a few days, but all these cleared up satisfactorily and he made a complete recovery.

Remarks by Mr. BRADBURNE.—This case presents one or two points of interest, the chief being the great tendency the temperature showed to run up to a high reading along with the great difficulty experienced in endeavouring to reduce it; also worthy of note is the antipyretic action of phenacetin without any seemingly weakening or depressing action on the heart—true, it was always given in whisky. Yet another point of interest was the way the patient's system immediately rejected all forms of quinine. This antipathy to the drug was a drawback, for had we been enabled to use frequent small doses of phenacetin and quinine (as recommended by Yeo) there is little doubt but that we should have been enabled to keep the temperature within bounds. The final and most satisfactory incident in the whole case is the gratifying results which followed the use of oxygen, and it was the early and steady employment of it that acted as the main factor which led to the ultimate recovery of the patient. It was fortunate that a patient exhibiting such symptoms had youth and a good constitution to assist him and us, and it must not be forgotten that part, if not the greater part, of our success was due to the most excellent and painstaking nursing which the patient received.

By the kind permission of Lieutenant-Colonel J. Wilson, R.A.M.C., officer in command of the Connaught Hospital, I am permitted to record the above case.

Medical Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

The Parasitology, Etiology, and Prevention of Malaria.

A MEETING of this society was held on Dec. 11th, Dr. F. W. PAVY, the President, being in the chair.

Dr. PATRICK MANSON communicated a brief *résumé* of the recent advances in the Parasitology of Malaria. He began by remarking that when this subject had last been discussed, in 1896–97, the cycle through which the malarial parasite went in the human body had been recognised, but the cycle external to the body had not been studied. How it was introduced was not known, but since the organism was a blood parasite some blood-sucking animal was suspected as the means of infection, and there were epidemiological and geographical reasons which pointed to the mosquito. Surgeon-Major Ross was one of the earliest disciples of the mosquito-malarial hypothesis, and he then set to work and after two or three years' indomitable perseverance he conclusively proved the truth of this theory. Ross first studied the evolution of the coccidium Schübergii in bird malaria and found there was an endogenous and an exogenous phase. Then turning his attention to the hæmomenas præcox, the parasite of æstivo-autumnal fever, he found it to be strictly analogous. The evolution of this malarial parasite in the blood of man was asexual, it entered the red blood-cells, developed, was liberated, and the new generation attacked other blood-cells. Outside the human being, however, the parasite developed in the body of the mosquito as a bi-sexual organism. The place of the malaria parasite in zoology was then discussed, and recent observations on the evolution of eimeria and coccidium by Pfeiffers, Simond, and Schüberg were referred to. The eimeria was the endogenous phase of the coccidium. The nomenclature was very confusing; some bodies had several names, others had no names at all. Reform in this respect was urgently needed. Two things were required to complete their knowledge of the entire life-history of the malaria parasite—namely, first, what circumstances determined the distinction of the merozoïtes, and whether they proceeded to the mosquito phase (the bisexual cycle) or to the human phase (the Golgi cycle); and secondly, what became of the parasite during the long latent period which sometimes elapsed between exposure to infection and the development of attack. An explanation was also wanted as to why crescents were so frequently found in this country and (in

the late autumn) in Italy, and so rarely in tropical Africa, and in Italy during the summer and early autumn. Turning next to the various kinds of mosquito concerned in the conveyance of infection, hitherto only anopheles had been implicated in malarial infection and of this there were 46 known species. Of these the parasite had been found in anopheles funestus, costalis, claviger, pseudopictus, superpictus bifurcatus, and the as yet unidentified species of Ross. There were 250 species of culex known, none of which was known to be an efficient carrier of the malaria parasite, though very few had been tested—namely, culex mimeticus, pipiens, tæniatus, nemorosus malariæ, and three unidentified culices experimented with by Daniels in British Central Africa. Much attention had been bestowed of late on what was supposed to be a phase of malarial intoxication—namely, blackwater fever. One German and two English expeditions had been sent to investigate it. Results as regard the etiology of the disease had been *nil*, although much useful information had been gathered bearing on blackwater fever and also on malaria. The geographical range was found to be more extensive than was generally supposed. As regards malaria, children were found to be specially susceptible to the disease, as many as 70 or 80 per cent. of native children under one year of age contracting the disease. The proportion infected became gradually smaller as age advanced until 10 or 12 years old. An immunity seemed to be obtained in some way among the native population. Reference was made to the post-mortem findings of Hill and Daniels in Demerara. The former observer showed that out of 45 deaths from malaria in Georgetown Hospital between June, 1893, and June, 1895, in persons born in the colony 31 were under 13 years of age and only three over 21 years. Practically all deaths from malaria occurred in children. Daniels in a series of 1289 post-mortem examinations from 1893 to 1895 found malarial pigment in none under a month old. It was present in 25 per cent. of those over one month and under 12 months, in 54 per cent. in those over one year and under two years, in 81 per cent. in those over two years and under five years, whilst in those above 30 years of age it was only found in 18 per cent. and in gradually diminishing proportions in each ascending decade. The conclusion drawn by Daniels was that immunity was acquired by the young in that district probably by previous attack. Turning once more to blackwater fever the theory that it was caused by quinine was untenable, for many persons had the disease who had not had quinine. Nor was it an intense form of malaria, for the evidences of malarial infections were commonly absent and the fever was not always found in intensely malarial places; nor was it a malarial cachexia, because it might occur within a few weeks of arrival in a malarial country. The suggestions that blackwater fever might be due to a special type of malaria parasite, or it might be due to a malaria parasite the virulence of which was increased by being transmitted through a particular species of mosquito, or it might be a disease *sui generis*, were tenable but they lacked confirmation. As to the prophylaxis of malaria there were four means available—to avoid natives, to take quinine, to destroy mosquitoes, and to protect from mosquitoes. These measures were efficient but were not always applicable. Complete protection was perhaps impracticable, but relative protection was always possible and was of immense value.

Dr. L. SAMBON and Dr. G. C. LOW gave an account of the experiments conducted on behalf of the Colonial Office and the London School of Tropical Medicine in the Campagna and in London. It was pointed out that the hypothetical connexion between mosquitoes and ague was a very old belief amongst the ancients and had long existed amongst the savage inhabitants of certain malarial areas in the tropics (in East Africa, for instance), where the word *mbù* indicated both the fever and the gnat. The discovery by Dr. Patrick Manson 20 years ago that the mosquito was the intermediate host of filaria Bancrofti, and the more recent discovery by Smith and Kilborne that pirosoma bigeminum was propagated by a common tick of cattle, supported the theory by analogy. The experiment about to be described was decided upon by the Colonial Office on the recommendation of their medical officer, Dr. Manson, who himself planned the experiment so that it might prove in a most convincing manner the truth or error of the mosquito-malarial theory and in order to ascertain how far the necessary protection might be consistent with the ordinary avocations of life. It consisted of two tests—one to prove the theory in a positive manner, the other by negative interference (should they both succeed). In the first test it was provided that a man should allow himself to be bitten by mosquitoes reared and infected in a malarious region and then sent home. In the second test two men who had never suffered from malaria were to go into one of the regions known to be undoubtedly malarious and live there throughout the fever season with no other protection than such as might prevent the bites of mosquitoes, for which purpose they would be provided with a mosquito-proof hut. For the first part of the experiment a supply of insects which had fed on a patient suffering from benign tertian fever was sent out in batches. Considerable difficulty was experienced in packing them successfully, but at last all the difficulties were overcome and an ample supply of anopheles was sent home from Italy. Mr. P. Thurburn Manson, Dr. Patrick Manson's son, was bitten by these insects and developed the typical symptoms of double tertian ague. Some little time after this Mr. Warren, an attendant in the laboratory at the London School of Tropical Medicine, subjected himself to the bites of the third batch of mosquitoes. He likewise underwent a severe attack of benign tertian fever. The notes of both of these cases were read. As regards the second part of the experiment Dr. Sambon and Dr. Low were sent out to the Roman Campagna where they lived in a mosquito-proof hut during the whole of the fever season, extending from July 19th to Oct. 19th. Two other persons also lived with them in the house. The place chosen was Ostia, a part of the Campagna known to be the most intensely malarial. All the inhabitants around suffered from malaria, and out of 14 or 15 healthy police who were sent down into the district all contracted the malady. The four inhabitants of the hut, however, remained perfectly well all the time and afterwards up to date. The hut was fully described. It was built by Messrs. Humphreys and contained six rooms. The windows and all the crevices were protected by wire netting having meshes of 17 millimetres. The windows were left wide open day and night. The occupants all went out daily for long excursions into the Campagna. At first they took care not to go out before one hour after sunrise and after one hour before sunset. They found that the risk of being bitten during the day was infinitesimal. At first they wore veils but found them to be unnecessary. The flies were very troublesome but they were never bitten by mosquitoes. They studied the habits of the anopheles claviger and the anopheles pseudopictus. The habits of these animals were then described. Finally, Dr. Sambon and Dr. Low gave as their conclusion that these experiments proved beyond a doubt that mosquitoes, and only mosquitoes, were capable of transmitting malarial fever, that protection from their bite implied absolute immunity, that the protection was easily obtained, and did not in any way interfere with the ordinary avocations of life.

Mr. D C. REES exhibited various phases in the Mosquito Cycle of the Malarial Parasite and specimens of the Anatomy of the Mosquito.

MEDICAL SOCIETY OF LONDON.

The Diagnosis and Treatment of Thoracic Aneurysm.

A MEETING of this society was held on Dec. 10th, Mr. JOHN H. MORGAN, the President, being in the chair.

Dr. J. KINGSTON FOWLER resumed the discussion on the Diagnosis and Treatment of Thoracic Aneurysm.[1] He remarked that the diastolic thud was a sign of the greatest diagnostic value, since it was present in no other condition. Tracheal tugging also, when present, invariably indicated aortic aneurysm. He had lately seen a case in which the absence of tracheal tugging helped to exclude aneurysm. The only fallacy of this sign was when there was a new growth almost surrounding the aorta and attached to the trachea; movement might thus be communicated. He had not had very much experience with the Roentgen rays, but he had not seen a case which could not be diagnosed otherwise. A 10-inch spark and first-class apparatus were necessary to elicit the outline of an intra-thoracic aneurysm. As regards Tufnell's treatment it was difficult to lay down general rules. Seven ounces of solids and eight of fluids were the quantities he had adopted. The longest time he had seen it carried

[1] Vide THE LANCET Dec. 1st, 1900, p. 1575.

out faithfully was three months. He referred to a case which he had seen some years ago of abdominal aneurysm in which the patient had died from rupture of the tumour. At the necropsy it was found that no clot had formed in the sac. The presence of aortic regurgitation, he thought, was certainly a contra-indication to this treatment, and he referred to a patient in whom the left ventricular compensation began to fail as a consequence of the treatment; intra-cardiac thrombi formed and, becoming dislodged, caused death from embolism. The presence of a distinct to-and-fro murmur, combined with hypertrophy of the left ventricle, might be regarded as certain evidences of aortic regurgitation. Uncomplicated aneurysm very rarely led to hypertrophy of the left ventricle or to a double aortic murmur such as that of regurgitation. The treatment of aneurysm very often consisted of several factors and it was difficult to decide which was the most important. Rest and iodide of potassium were very efficacious in the relief of pain. If no improvement took place by these means he then added a modified Tufnell diet. Turning to Lancereaux's method he had seen three cases treated on this plan. The first was a male, aged 44 years, with aneurysm of the ascending aorta of sudden onset and six months' duration without a history of syphilis. The patient was a road-scraper who attributed the disease to a blow on the sternum. There were aortic regurgitation and tracheal tugging. The injections were used on seven occasions. On June 2nd 150 cubic centimetres of a 2 per cent. solution and on the 6th 150 cubic centimetres of the same strength were injected. The temperature went up to 102° F. and he was restless for two days. The injections were repeated on the 21st. On June 25th and August 1st 60 cubic centimetres of a 5 per cent. solution were injected. On August 10th and 22nd 200 cubic centimetres of a 5 per cent. solution were injected. The patient left the hospital on Nov. 1st and attended as an out-patient. There was nothing particularly interesting in his case. Seven injections were a very small number. Another case was that of a female, aged 48 years, with aneurysm of the transverse aorta, the duration of which was two years. There was no aortic regurgitation. She had injections on May 24th and June 11th of 150 cubic centimetres of a 2 per cent. solution into the buttock. On June 16th she had a good deal of neuralgic pain and on the 17th she was taken suddenly ill with vomiting and shortly after with profuse sweating at 4 P.M. At 6.30 P.M. she became unconscious, was blanched and cold. There was no alteration in the physical signs. There were no convulsions. In the evening she became less unconscious. On the 18th consciousness returned and she complained of severe pain at the back of the head and down the neck. Next day (the 19th) there were constant yawning and sighing, with persistent pain in the back of the head. These symptoms pointed to blocking of the internal carotid and subsequent re-establishment of the circulation. There was no evidence of embolism of either the middle or the anterior cerebral artery. The third patient, a carman, aged 52 years, was under the care of Dr. W. Cayley. There was an aneurysm of the transverse aorta forming a large tumour projecting between the first and fifth costal cartilages. There was no history of syphilis. He had had rheumatic fever in 1891. The symptoms of aneurysm had first begun in 1895, the swelling having appeared in 1898. He had been submitted to a restricted diet with benefit and had returned to work, but the symptoms came on again, and finally he went into the Middlesex Hospital, where in July he had 15 injections, gradually increasing in strength, beginning with 220 cubic centimetres of a 2 per cent. solution at a temperature of 99° and increased up to a 20 per cent. solution. There was pain after all of the injections with a rise of temperature after some. The pulsation appeared to be somewhat less, but the tumour was not diminished in size and the skin over it was so thin that it threatened to burst. Dr. Cayley had informed him that in his opinion no benefit had resulted from the injections. His (Dr. Kingston Fowler's) experience was not very favourable to the treatment. The first of the three patients had probably been benefited and he thought that when there was an aneurysm of the ascending part of the arch with a small orifice of entrance it might be useful. But, on the other hand, where there was a very large sac containing no clot, with a large orifice of entrance, neither restricted diet nor Lancereaux's method would be of much benefit. As regards tracheotomy it was of course no use when there was direct pressure on the trachea. He referred to a case under the care of the late Sir George Johnson when a bilateral spasm of the adductors had existed due to pressure on one pneumogastric nerve. The patient had severe attacks of dyspnœa and tracheotomy was performed by the late Sir William Ferguson with considerable benefit. Inhalations of oxygen and the injection of morphia were useful in those cases where spasm existed. The prognosis of aneurysm, he believed, was better than was generally thought, and he referred to several cases which had lived for years—one for 13 years, another for six years, and another for nine years.

Dr. ROBERT MAGUIRE wished to emphasise the importance of the apparatus employed in transfusion, for it was of the greatest importance to introduce the gelatin solution as rapidly as possible.

Dr. T. GILBART SMITH had seen the patient referred to by Dr. de Havilland Hall. At first he had suspected aneurysm but subsequently had been doubtful about it. There was no paralysis of the left vocal cord. The larynx was twisted over and the symptoms pointed to laryngeal trouble from some other cause. It appeared to him like a case of shrunken lung which had retracted from the front of the heart and the accentuated second sound had appeared to him to be of pulmonary origin. He referred to a patient with a dilated pulmonary artery due to a retraction of the lung presenting many of the symptoms of aneurysm which had made him suspect that condition in this case. But when he saw the case two years ago he then came to the conclusion that after all it must be one of aneurysm. Referring to the Roentgen rays he had seen several cases in which undoubtedly that method was of considerable help and by its means malignant disease had been diagnosed which was previously unsuspected. He had seen several cases treated by gelatin injections, but on the whole they were not distinctly benefited by them. He had long ago given up Tufnell's treatment, for there was not sufficient benefit in return for the misery which it entailed. He thought that the rigid rest and starvation reduced the resisting power of a patient's vitality. He referred to a case in which aneurysm was complicated by locomotor ataxy. Tracheotomy was no use unless the obstruction existed in the larynx and the real question was whether the surgeon could dilate the constriction below.

Dr. SEYMOUR TAYLOR thought that it would have been useful if the question of the diagnosis between aneurysm and intra-thoracic growths had been discussed. The cardinal symptoms of aneurysm were really only four or five in number. All the others were common to aneurysm and new growths in the thorax. Thrill was a very valuable sign in the diagnosis of aneurysm, and it generally meant that there was little or no laminated clot. This and the diastolic shock were conclusive signs to his mind. The "whiffing" sign, which could be heard with every pulsation of the heart when the trachea was pressed upon, was another sign of value. He did not attach very great importance to tracheal tugging. It might occur with cardiac hypertrophy and it was by no means constant in aneurysm. As to treatment, he had not seen the slightest benefit from Tufnell's treatment. He believed that it lowered the tone and the resisting power of the patient. Tracheotomy was no use unless the dyspnœa was due to spasm of the vocal cords.

Dr. KINGSTON FOWLER explained that he did not intend to imply that tracheal tugging was present in all cases It could only be elicited when the aneurysm was in contact with the trachea or the main bronchus.

Dr. EDMUND CAUTLEY thought that the reason why Tufnell's treatment was not generally successful was because it had been employed in unsuitable cases. If cases among the lower orders, especially with a history of alcoholism, were submitted to it they failed, but in cases of simple sacculated aneurysm occurring among the better classes who would coöperate intelligently it was successful, and he referred to a case in which the patient after 10 weeks' treatment had made great improvement, and after 21 further weeks of modified diet had recovered sufficiently to ride and to shoot; the only thing he could not do was to walk fast. Insomnia and a difficulty in passing his concentrated urine were the only troubles of which this patient had complained. He referred to another case which had greatly improved under the diet and calcium chloride.

Dr. F. DE HAVILLAND HALL, in reply, laid stress upon the fact that the absence of tracheal tugging was, in is

opinion, of value in showing absence of aneurysm. He did not believe that iodide of potassium alone was as successful as when combined with a restricted diet. He would like to see the effect of iodide of potassium tried while the patients were up and about. As regards the length of time during which Tufnell's treatment could be carried out seven months was the longest that he had seen in a patient who had then been sufficiently well to return to his work on the Stock Exchange. Shortly afterwards he exerted himself violently and died suddenly. He had not been impressed with the value of Lancereaux's treatment, but he thought it was too early to judge in the matter because cases of aneurysm went on for years.

OBSTETRICAL SOCIETY OF LONDON.

The Treatment of Retroflexion of the Gravid Uterus.—A New Theory of the Causation of Sex.—Exhibition of Specimens.

A MEETING of this society was held at 20, Hanover-square, W., on Dec. 5th, Mr. ALBAN DORAN, the President, being in the chair.

Dr. W. J. SINCLAIR read a paper on a Contribution to the Diagnosis and Treatment of Retroflexion of the Gravid Uterus. He pointed out that in a typical case of retroflexion of the gravid uterus the symptoms produced a *tout ensemble* which was quite characteristic and made diagnosis easy and certain. The striking constant feature was irritability of the bladder with more or less retention of urine. The contributions to the journals on the diagnosis and treatment of the condition had a tendency to exaggerate the frequency of complications, and the literature of the subject seemed to indicate a too ready resort to operative treatment. The special method of treatment which Dr. Sinclair advocated was extremely simple. It consisted essentially in the introduction of a watch-spring pessary, care having previously been taken to empty the bowel and bladder. After the introduction of the pessary, if the patient were made to rest on her side, lying over with her face downward as far as she could with comfort, it would be found that the action of the pessary alone would restore the uterus to its normal position in a few hours. Illustrative cases were given. The whole number of cases in which the method of treatment had been tried by Dr. Sinclair was 15. These had been consecutive and in all the method of treatment had been successful. One case was mentioned in which the watch-spring pessary treatment was adopted owing to a misunderstanding in a case of fibroid tumour attached to the fundus uteri, which had fallen back into Douglas's space and produced the bladder symptoms of retroflexion of the gravid uterus. In this case the action of the pessary raised the tumour into the abdominal cavity. The question of retroflexion of the uterus as a cause of abortion was incidentally mentioned. Abdominal section or any severe method of treatment of retroflexion of the gravid uterus was deprecated. Ventrofixation after abortion and involution was recommended in cases of adherent retroflexed uterus.—The PRESIDENT agreed that retention of urine and irritability of the bladder were very important symptoms for diagnostic purposes. Of recent cases, Konrad's of Budapest was interesting. Relief came too late. Sloughing of the mucous membrane of the bladder and death followed abortion which occurred three days after reduction of the uterus. He had referred at the meeting of the society in April to Unterberger's case, where the displaced pregnant uterus obstructed the bladder and forced open the urachus. Lastly, he dwelt on Gemmell's case at Liverpool, where a woman was seized with abdominal pain and retention of urine at the third month and backward displacement of the gravid uterus was suspected. The mass in the pelvis, however, was found to be a fibroid, which was enucleated through an abdominal incision. The pregnancy continued to term. As to difficulty in keeping the reduced uterus in its place, the President referred to Szanto's case where the displacement was attributed to relaxation of the supports of the uterus caused by typhoid fever; the uterus was replaced manually. Under such circumstances recurrence of the displacement was no doubt very probable.—Dr. J. INGLIS PARSONS had found that the air-ball pessary answered very well. He preferred that gradual method to the more rapid method of manual reposition because it was less likely to produce abortion. Cases of retroversion bound down by adhesions were not at all common; he had never come across a case of this kind in which pregnancy had occurred. If confronted with this complication he would prefer to open the abdomen, free the adhesions, and entertain the hope that the pregnancy would go to term.—Dr. A. L. GALABIN said that he thought that Dr. Sinclair's paper was valuable in calling attention to a mode of treatment the value of which would seem not to have been duly appreciated provided that it proved as successful in the hands of others as in those of Dr. Sinclair. He did not think, however, that this treatment ought to supersede the even simpler one of immediate taxis. He was accustomed to place the patient in the knee-elbow position and apply pressure to the fundus, first from the vagina, then, if that failed, from the rectum. His experience was that an anæsthetic was not required in one case out of 20. He had been accustomed 25 years ago to restore retroversions of the gravid uterus in the out-patient room without even admitting the patients to the hospital. In some cases, however, an anæsthetic alone rendered the taxis practicable. He had never finally failed to reduce a uterus nor had he found it necessary to induce abortion, and for many years he had employed nothing but immediate taxis. His experience therefore strongly confirmed Dr. Sinclair's view that firm adhesions in connexion with retroversions of the gravid uterus were very rare. He had not found abortion follow immediate taxis, but he had known it occur during the use of elastic pressure. He had not employed the watch-spring pessaries as a primary treatment but had always employed them both for keeping up the uterus when restored and in cases in which the restoration at first did not appear to be quite perfect. In future he should certainly try the plan when restoration could not be effected without an anæsthetic. As regarded the mechanism of the pessary he attached even more importance to a leverage which Dr. Sinclair had not mentioned than to the one which he did mention. This resulted from the traction on the cervix produced by stretching backward the posterior vaginal fornix. In this case the uterus itself was the lever, the fulcrum was the position of the internal os, where the uterus was most fixed by its ligaments, and the dragging of the cervix backward tended to tilt the fundus forward.—After some remarks by Dr. HERBERT R. SPENCER, Dr. G. H. DRUMMOND ROBINSON referred to a case of incarcerated, retroverted gravid uterus which he had seen when he was clinical clerk to the late Dr. Matthews Duncan. The patient, who was aged 24 years, was pregnant for the first time. She had retention of urine on Nov. 6th, which was soon followed by constant dribbling of urine. On the 28th nine pints of ammoniacal urine were drawn off by catheter. On Dec. 6th, after many unsuccessful attempts to replace the retroverted gravid uterus, Dr. Duncan induced abortion. On the 5th protrusion and redness of the umbilicus were noticed and a few hours afterwards offensive urine began to ooze from it, and this continued until the patient's death on the 20th. The mucous membrane of the bladder began to slough and to be passed per urethram soon after the patient's admission to the hospital. At the post-mortem examination the mucous membrane of the bladder was almost completely absent and the bladder communicated with a fistula at the umbilicus. The uterus was not adherent in Douglas's pouch. The right broad ligment contained an abscess. Dr. Duncan stated that he had never previously been obliged to induce abortion for this condition.—Dr. R. BOXALL thought that they were much indebted to Dr. Sinclair for drawing attention to the fact that abdominal section or any severe method of treatment was rarely called for. For his part, he had never met with a case which would not yield to well-directed pressure and he doubted if anyone present had met with a case which necessitated even puncture before the uterus would be replaced. He regarded chloroform as useful in enabling the reduction to be effected with less force and consequently with less danger of producing abortion than when no anæsthetic was given.—Dr. EWEN J. MACLEAN cited a case of Retroverted Gravid Uterus at the fourth month in a primipara. The symptoms were urgent and, the usual manipulations failing, the patient was admitted into the hospital with a view to the administration of an anæsthetic. After left decubitus, however, for several hours the uterus suddenly reduced itself into its normal position.—Dr. SINCLAIR briefly replied.

Mr. E. RUMLEY DAWSON read a paper on the Essential Factor in the Causation of Sex: a New Theory of Sex. The ovaries, he said, normally discharged ova independently of each other, probably working alternately. The proof was that the number of cicatricial depressions, the result of ruptured Graafian follicles, were nearly equal in each ovary,

and together they equalled the number of menstrual periods passed. Normal single pregnancy was the result of the fertilisation of an ovum from one ovary only, by the combined secretion of both testicles; therefore, the male parent did not influence the sex of the coming child. The sex of the child depended upon which ovary supplied the ovum fertilised; if the right a male and if the left a female. He quoted cases of ovariotomy where one ovary only was removed, the subsequent pregnancy giving a child corresponding in sex to the ovary which was not removed. He also gave cases of tubal pregnancy where by operation a male fœtus was removed from the right tube, the corpus luteum being in the right ovary; and *vice versâ* where a female fœtus occupied the left tube, the corpus being in the left ovary. Cases were quoted to show that the affected tube in tubal pregnancy and in tubal moles was generally on the same side as the corpus-luteum-bearing ovary. Cases where either tubal or cornual pregnancy occurred on the opposite side to the corpus-luteum-bearing ovary were unusual and were explained by two theories—viz.: (1) the grasping by the tube of one side of the ovary of the opposite side; and (2) the transmigration of ova. The production of twins and plural births was also considered. Here the ovaries must act at or about the same time when the sex of the twins was different, while when twins were the same sex it was shown that the ovary of one side might provide two ova. Unilateral sterility was shown to account for those cases where the children were all of the same sex or where, after a child of one sex was born, the remainder were of the opposite sex. The usual mixture of children as regards sex which most parents had was due to both ovaries usually being active, and thus supplying children of each sex. There were two ovaries only and two sexes only. — The PRESIDENT remarked that discussion on sex problems had been popular from time immemorial, but, however interesting they might be, they seemed ever barren of useful results. Mr. Dawson had taken great pains to collect what must certainly be called clinical evidence and had thus avoided *a priori* arguments founded on one or two cases of unilateral ovariotomy. Did he seriously believe that where a male heir was a matter of national importance the removal of a queen's left ovary would at least avoid disappointment?—Dr. G. F. BLACKER was surprised to find Mr. Dawson claiming originality for a thing which dated back to 500 B.C. In view of the large number of observations collected by various observers and the numerous experiments carried out upon animals he found it impossible to believe that the male parent played no part in the determination of sex and that the sex of the ovum was settled at the time of its expulsion from the ovary. Mr. Dawson's theory did not explain any of the known facts with regard to the relative proportion of the sexes. Even if they accepted it it did not advance their knowledge as to the real cause of sex. He felt sure that many of the Fellows could instance cases of unilateral ovariotomy and subsequent pregnancy which were in direct opposition to Mr. Dawson's assumption. He could relate two such cases. If the time ever came when they would be able to explain the exact causation of sex he felt sure that it would be found to be, not in one theory or in any one factor, but in a number of factors interacting under varying conditions. Any theory of sex put forward for acceptance must apply to the whole of the vertebrata. Birds had only one ovary. The common fowl had only one, the left ovary. Would Mr. Dawson kindly explain where, according to his view, cocks came from?—After some remarks by Dr. PARSONS and Dr. MAURICE DEE, Dr. SPENCER said that the paper was supported by what appeared at first sight to be an imposing array of facts and contained some statements of opinion which were not facts. It was a pity that more inquiry had not been made as to the sex of the children who were born after unilateral ovariotomy. He had himself removed a left-sided ovarian tumour completely and the patient had in a subsequent pregnancy borne twins of different sexes. There was no doubt whatever that the tumours had been completely removed. Cases of this kind absolutely disproved the theory of Mr. Dawson.—Mr. DAWSON, in his reply, stated that pregnancy, after the removal by operation of the tube of one side and of the ovary of the opposite side, was to be explained by trans-peritoneal migration of the ovum. He did not consider that the male parent had anything to do with sex causation, nor did he consider it necessary to argue from causation of sex in the lower animals, but confined his arguments to the human species. Cases where, for instance, male children were born years after the removal of a right ovary might be explained by a small portion of the right ovary having been left behind, and he quoted two cases to show that this had not infrequently occurred. In one such case both ovaries had been removed, yet a male child was subsequently born on two occasions.

Dr. SPENCER showed two specimens of Parovarian Cyst with Twisted Pedicle, in which the ovary only was congested and inflamed.—These specimens were discussed by the PRESIDENT, Dr. BOXALL, and Dr. MACLEAN.

LIVERPOOL MEDICAL INSTITUTION.

Lupus of the Face.—X-Ray Photograph of an Aneurysm.—Uterine Fibroids. — Peripheral Neuritis. — Medical Weights and Measures.

THE fifth ordinary meeting of the session was held on Dec. 6th, Mr. EDGAR BROWNE, the President, being in the chair.

Mr. C. THURSTAN HOLLAND showed Two Cases of Lupus of the Face treated by x rays. One patient was shown in 1898, and except for a very slight relapse necessitating six more exposures this year had remained cured and was now practically well. The other, a girl, eight years of age, was treated this year for a patch of lupus on the left cheek five inches in diameter. Ten exposures of ten minutes each had resulted in complete cure, the scar tissue being quite soft, non-adherent, and non-contractile.—Mr. HOLLAND also showed an x-Ray Photograph of an Aneurysm.—Dr. LLEWELLYN MORGAN thought that the case of aneurysm was of interest because the patient had sought relief for hoarseness of the voice rather than for any symptoms directly referred to the aneurysm, and diagnosis was based primarily upon the laryngoscopic examination and pressure symptoms upon the left recurrent laryngeal nerve. —Dr. F. H. BARENDT considered the treatment of the cases of lupus to be most satisfactory, and in the case of the girl he thought that the resultant scar was superior to the after-treatment (even when successful) of lupus by scarification, cauterisation, and decorticating medicaments.

Dr. H. BRIGGS read notes of two cases of Uterine Fibroids of Large Size (the growth and uterus weighed 8¾ lb. and 10 lb. respectively). The lower uterine segment was involved and the pelvis was blocked. In cases of this kind the advantage of first getting rid of the growth by enucleation and then of completing the hysterectomy by Baer's method was obvious. In some cases of large tumours enucleation, apparently safe, was tedious or difficult by reason of the dense fibro-myomatous trabeculæ intersecting the tumour and reaching its capsule.

Dr. NATHAN RAW briefly described the main clinical features of a recent epidemic of Peripheral Neuritis associated with symptoms of Arsenical Poisoning and showed photographs and lantern slides illustrating the skin lesions and motor paralysis. He described the differential diagnosis between alcoholic neuritis, beri-beri, and arsenical poisoning, and gave it as his opinion that the present epidemic was entirely due to the presence of arsenic in beer and stout. —Time did not permit of any discussion on this subject, and the matter being of public importance the discussion was unanimously adjourned to the next meeting, to be held on Dec. 20th.

Brigade-Surgeon-Lieutenant-Colonel E. NICHOLSON read a paper on Medical Weights and Measures. He said that members of the medical profession should form an opinion on the British system of weights and measures and on the alleged superiority of the metric system. He showed the evolution of the imperial weight from the Egyptian royal cubit through the Alexandrian talent and the Roman *libra*, and how the British Pharmacopœia ounce differed by only half a grain from the Roman weight. The history of this and of the rival weights of bygone times, especially Troy weight, was detailed in printed tables. He regretted that the Pharmacopœia Committee had not resisted the permissive use of Troy weight by druggists and showed that the adoption of imperial weight in the British Pharmacopœia was ignored by the Board of Trade; he urged the use of "oz." instead of ℥ in the prescription of solid drugs to insure British Pharmacopœia weights being used. An account of the metric system and its fallacies was given; it was being vigorously pushed by advocates whose representation of the alleged irrationality and difficulty of the British system was

due to ignorance of it. He pleaded for a better teaching of their weights and measures and of their concordance in schools. If every trade or profession spoke for itself little dissatisfaction would be found with the system which had grown with their civilisation; any trade or any person could decimalise the weights and measures for calculation or industrial purposes. The medical profession were warned against being lured into consent to the metric system by the plausible use of the word "scientific." Examples were given of how the metric system even in France, after more than a century of official pressure and police action, was disliked by the people; they only submitted to the system, without accepting it, and they evaded it whenever possible. The metric system, if made compulsory in this country, would be really a revolutionary system, uprooting a great deal more than their weights and measures.—Dr. KARL GROSSMANN differed from Brigade-Surgeon-Lieutenant-Colonel Nicholson entirely in regard to his conclusions and thought that the paper was an apology for the survival of the system rather than a claim for its persistence. The ancient Egyptians had done many things which they should never attempt and others which the most brilliant intellects had failed to explain, but their mode of measuring and weighing did not suit the present time with its altered conditions of communication as well as the decimal system. The relationship between the metre, the gramme, and the litre was simple and easily intelligible, and the adoption of the metric system would do away with the useless incubus of the weights and measures in the old multiplication-table and so far would relieve the brains of their already overburdened school children. The present English system did not show the survival of the fittest but the persistence of the "unfittest," and its proper place was beside the "cubit" in the museum amongst the relics of the past.—The PRESIDENT also made some remarks and Brigade-Surgeon-Lieutenant-Colonel NICHOLSON replied.

EDINBURGH MEDICO-CHIRURGICAL SOCIETY.

Exhibition of Patients and Specimens.—Experiences in South Africa.

THE second meeting of this society was held on Dec. 5th, Mr. A. G. MILLER, the President, being in the chair.

Dr. BYROM BRAMWELL exhibited a man showing an exceptional form of Tabes in which the toe reflex was extension instead of flexion. The usual reflex on tickling the sole of the foot was a flexion of the toes, as was first pointed out by a French physician named Babinski some three years ago. In certain conditions of disease in which the pyramidal tracts of the cord are affected, as in spastic paralysis, extension of the great toe resulted. In locomotor ataxia this phenomenon was not present. The case shown was that of a labourer, aged 42 years, who had suffered from tabes for about 10 years. He was markedly ataxic, balanced himself with difficulty, and had trouble with micturition and defecation; there was thoracic analgesia. The knee-jerk was abolished and the Argyll-Robertson sign was present. He walked with his feet wide apart and dragged his legs. On tickling the sole an exception to the ordinary rule was found in that he showed a double extension. The case, however, was not a real exception for the patient had had two attacks of hemiplegia 11 years ago and again two years ago. There was a lesion in his crossed pyramidal tracts as well as tabes dorsalis and this explained the apparent anomaly. The deep reflexes in the upper extremity were feebly marked, but the jaw reflex took the form of a clonus. The lesion had extended up to the cervical region and so had abolished the arm reflexes, but the jaw reflex was still intact.

Dr. MCKENZIE JOHNSTON showed (for Mr. ALEXIS THOMSON) a patient, aged 24 years, after Complete Excision of the Larynx for Epithelioma. In August, 1899, the patient began to suffer from hoarseness, shortness of breath, and dysphagia. These symptoms increased in severity and tracheotomy had to be performed by his own medical attendant on short notice, and later thyrotomy was performed. At this time a piece of the growth was removed and was pronounced by Professor W. S. Greenfield to be a malignant papilloma. On examination on Oct. 4th the whole larynx was found to be filled with a fungoid mass which pressed on the epiglottis. A further thyrotomy was done as the growth did not appear to be malignant, as much pus escaped, and the cartilages were found to be bare. After a week's delay, and on the pathologist's report that it was a squamous-celled epithelioma, the whole larynx was removed. The patient was in excellent condition both before and after the operation, and the remarkable fact was his early age. His power of speech was feeble but distinct. Part of the anterior pharyngeal wall was removed at the same time. The patient was out of bed a week after the operation and in three weeks was able to swallow anything.

Mr. HAROLD STILES showed: 1. A boy, aged six years, after Excision of a large Simple Lymphoma of the Neck. The glands had been enlarging for two years and at the operation they extended from below the jaw to the clavicle as a large lobulated mass. The interest lay in the size of the growth and in its pathology. Many surgeons thought that it was a multiple cystic hygroma, but Mr. Stiles thought it was glandular because it had a doughy, false fluctuating feeling, as if a bunch of grapes were under the skin. The operation was not difficult as the glands were not adherent. The spinal accessory nerve went through the mass and had to be sacrificed. There was no recurrence in the region of the operation but there were one or two enlarged glands in the parotid region. The glands on section had a sarcomatous appearance, but they had really undergone a simple hypertrophy. Such glands must be developed after birth and they might result from a change of the fat cells into lymphoid tissue. 2. A girl, aged eight years, six months after Amputation at the Hip and the removal of the greater part of the innominate bone for tuberculosis. Previously to this major operation she had been subjected to several operations for the removal of tuberculous disease. The disease, however, recurred in the hip, and as the patient was dying from hectic this operation was performed. A skiagram taken six months after the operation by Dr. H. Rainy showed that re-formation of some bone had taken place. The liver, which was enlarged and waxy, had also undergone diminution in size.

Dr. GEORGE ELDER exhibited (1) four Brains showing four different Seats of Cerebral Hæmorrhage, and briefly described the clinical history of each; and (2) a Tumour of the Dorsal Vertebræ pressing on the Spinal Cord from a case of paraplegia.

Dr. BYROM BRAMWELL showed: 1. A Horizontal Section through the Brain with a large Tumour of the Motor Centres and Centrum Ovale (infiltrating glioma). The specimen was from a man, aged 24 years, who had had frequent attacks of Jacksonian epilepsy, beginning in the left hand and on the left side of the face. He had no other general symptoms of cerebral tumour. Under iodide of potassium and bromide of potassium he improved, but returned later with the same attacks and some loss of power in the arm and leg. The diagnosis was a small glioma in the motor area. Mr. J. M. Cotterill trephined over the face centre, but the brain appeared to be normal. Faradaisation over the motor area failed to produce muscular contraction even with strong currents. The patient soon recovered from this operation and was discharged. Later he returned with left-sided hemiplegia, double optic neuritis, and hernia cerebri. His headache suddenly became very severe and he died. The points to note were that there may be a brain tumour with merely localising symptoms but no general symptoms, and that faradaisation may fail to cause muscular contraction. 2. A Skull-cap from a patient who died three months after the operation of Trephining in a case of Cerebral Tumour.

Professor J. CHIENE, in bringing before the society his paper on Experiences in South Africa, said that he had divided the account of his stay in South Africa into two periods—viz., the period from the beginning of April until the end of June, and the period from the end of June until the end of August; from Cape Town to Norval's Pont in the first instance and from Norval's Pont back to Cape Town in the second. Whatever might be the verdict of the Hospitals Commission everyone must allow that the question of army medical reform was only a sub-section of the wider question of army reform. The four great hospitals in the neighbourhood of Cape Town were Wynberg No. 1, Wynberg No. 2, Rondebosch No. 3, and Woodstock No. 4. Much had been said about Woodstock. It was an old building near Cape Town, lying on the shore, and, like all old buildings in South Africa, it was infected with animal parasites at one time. On his second visit great improvement in this particular had taken place. He never noticed any smell from the town drains which opened into the bay near the hospital. The drain for

sewerage opened 300 yards from the shore and the current carried the dejecta away from the hospital, and, judging from the excellent results of the surgical cases which he saw there, he could not look upon the hospital as an unhealthy one. The dejecta from the hospital, after being mixed with izal, were buried in a trench on the shore. Professor Chiene's time was principally spent in the Wynberg and Rondebosch hospitals and both hospitals were on excellent sites. Regarding the conveyance of the soldiers from the trains and the hospitals, he said that being at Wynberg he saw them arrive by train and again saw them immediately after admission to the hospital. The difference between hospital trains and ordinary trains carrying invalids must be clearly understood. In the former the soldiers were most comfortable, while in the latter the reverse was often true. In future, Professor Chiene urged, some form of portable cooking stove must be carried in these ordinary trains by means of which simple food may be cooked. A supply of food at the stopping places could not be depended upon. It was often very sad to see how worn and weary the poor fellows were on their arrival. As regards their conveyance from the trains to the hospital at Wynberg, this was done in ambulance carts. On a smooth road such a cart was fairly comfortable, but in his opinion the ambulance litters were certainly more comfortable, and he thought it would be a question for the future if these litters should not replace carts in the conveyance of patients from trains to hospitals. These litters were on rickshaw wheels with rubber tyres and they worked most smoothly. A question for the future would also be, Could any improvement be made in ambulance wagons for the removal of patients from the battlefield to the nearest hospital? The Boers used, as a rule, wagonettes and Cape carts. The essentials of such an ambulance wagon were strength, easy turning, easy motion, and easy access to the patient by the attendant. The stage coaches in South Africa were hung on leather, but in ambulance carts care would be necessary to prevent too great a swing of the carriage for fear of sickness which was analogous to sea-sickness. Professor Chiene then stated his experience under the following headings: 1. Anæsthesia.—Chloroform was the favourite anæsthetic, but he had never seen any trouble with any anæsthetic and very little subsequent sickness. The condition of the wounded soldier reminded him of the state of a patient suffering from shock, not taking much interest in his own case, and this long after the receipt of his injuries (for these cases were seen at the base). They seemed to be suffering from "chronic shock," if the term might be used. He could recall only one case of a soldier who refused to be operated upon. 2. X rays.—Great difficulty was often experienced in localising bullets in the spine and pelvis, but in the limbs little difficulty arose. In the pelvis a rectal examination would sometimes localise a bullet when the x rays had been found wanting. He was satisfied that the efficient use of the x ray apparatus depended very much on the experience of the man who used it. The method of McKenzie Davidson gained most acceptance. 3. Hospital trains and ships.—In Natal the absence of corridor carriages rendered the Princess Christian's hospital train of much value, and fortunately it was ready just in time to cross the Tugela after the relief of Ladysmith. In Cape Colony there were four trains with every comfort. The good that these trains did was incalculable. Kipling had written about them and Professor Chiene wished that his article might be reprinted separately. As regards hospital ships, he had no experience of those fitted up at home, but he saw two of the sick ships fitted up in Durban, the *Lismore Castle* and the *Simla*, and nothing could be better, with every comfort and convenience. Colonel Gallwey looked upon these ships as base hospitals. They contained 1660 beds. It had to be remembered that the problem in Natal was a much easier one than was that in Cape Colony—50,000 men as compared with 150,000; 200 miles of railway as compared with 1000. 4. Bullet wounds.—When a soldier was struck at near range the wound was worse than when the charge was received from a distance. When struck at a distance of between 200 and 400 yards a more ragged wound resulted than when struck at 1000 or 1500 yards. Possibly the bullet was like a top, at first it spun round a centre and then after a time settled down into its true course. The cases of severe brain injury must be divided into two groups: first, those in which the bone and brain were severely injured and torn; and, secondly, those in which, with a comparatively small bone wound, the brain was much torn. In the first the injury was probably due to expanding or explosive bullets; in the second the Mauser bullet might be the cause when fired at short range. Dr. Hugh Marshall had examined the green coating of some bullets and had found that it was due merely to the action of fatty acids on the copper. 5. Head injuries.—The cases of cerebral hernia which Professor Chiene saw in South Africa seemed generally to be on a fair way to recovery, and in some this was complete. Dr. Louis Irvine, a civil surgeon at Port Napier, Pietermaritzburg, spoke of the good results of formalin in cases of hernia cerebri. Professor Chiene saw several cases of severe brain injury followed by recovery. He related several remarkable cases of such injury in which recovery took place. 6. Injuries of blood-vessels.—He had seen several cases of arterio-venous aneurysm. They occurred in the neck and in the extremities. Much improvement resulted from proximal ligature of the main artery when the communication was between the carotid artery and the internal jugular vein. In the thigh ligature of the femoral artery did good and in the leg the aneurysm was generally laid open and the artery and vein were ligatured above and below the opening. The improvement which took place after proximal ligature of the main artery with the absence of any venous dilatation made him wonder if the condition could be due to bruising of the artery and vein and subsequent matting with constriction. The number of cases of painful neuritis from bruising of the nerve, those due to adhesion of the nerve to bone after fracture, and those due to splinters of bullets lodging in the nerve made him think that the same might have occurred to arteries and veins lying side by side. 7. Injuries of the thorax.—It was exceedingly rare to find a patient who said that he had spat blood at the time of the wound to the lung. Apparently the Mauser and Lee-Metford bullet passed through the lung searing it and preventing hæmorrhage. On the other hand, in many cases there was hæmothorax, probably from the intercostal vessels. Empyema as a result of lung injury rarely occurred and he saw only four cases. He had seen several cases of penetrating thoracic wounds in which after careful examination of the entrance and exit wounds he could not but conclude that the bullet had traversed the heart. 8. Abdominal injuries.—He had no opportunity of forming an opinion on the question of immediate operation in penetrating wounds of the abdomen. It was currently believed that the hungrier a man was the less was his risk in an abdominal wound. As in the lung, so in the intestine, apparently the Mauser bullet made so small a wound that neither bleeding nor extravasation occurred. He could explain the recoveries after penetrating wounds in no other way. In speaking of enteric fever Professor Chiene said that hospital huts and tents were better than houses in which to place the patients. He with many others looked with apprehension to the coming year for fear of an outbreak of enteric fever and especially amongst the new immigrants. The dejecta of typhoid and dysenteric patients had been thrown out all along the railway lines. He thought that there should be no delay in sending out the best incinerators and compelling the authorities to burn the dejecta. There was much difference of opinion as to the merits of typhoid inoculation. Many thought that what was called in the army "simple continued fever" was aborted typhoid fever and at Estcourt Hospital he was informed that five out of six such cases reacted to the Widal test. Had these patients been inoculated for typhoid fever and was the reaction due to the inoculation? The Widal test was not in use, as a rule, in the military hospitals and it was from the civil hospitals that its value as a diagnostic would be heard of. As regarded dysentery he was struck with the general depression of spirits of the patients. The treatment by the free use of magnesium sulphate followed by ipecacuanha was the favourite remedy. In conclusion, Professor Chiene expressed the hope that the medical history of this war would be fully described in the form and with the thoroughness that the great Civil War in America had been dealt with by the Government of the United States. From such a history many most valuable lessons would be learnt which would be of the greatest use to all members of the medical profession, but especially to the members of the Royal Army Medical Corps, and to those civil surgeons who in the future might be called upon to serve Her Majesty in times of war.

Dr. ROBERT STIRLING (Perth) also very briefly described some of his experiences as a surgeon in South Africa.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.—A meeting of this society was held on Nov. 9th, Dr. A. Newsholme, the President, being in the chair.—Mr. J. Cantlie read a paper on Plague, its Symptoms and Spread, in which he insisted on the insidious character of the disease at the commencement of an outbreak, the early cases being, as a rule, difficult of diagnosis and appearing for the most part as a non-fatal bubonic fever. Thus in 1893, the year preceding the virulent epidemic at Hong-Kong, numerous cases of non-syphilitic buboes were operated on among the seamen of the British Navy, and the same thing had been observed elsewhere. It was important to distinguish between these cases, which he called cases of "pestis minor," and the mild cases occurring during an epidemic of the typical and virulent disease, to which he would give the name of "pestis ambulans." All the cases of pestis minor that he had seen were among seamen. After a few days of febrile disturbance a gland in the groin became swollen, pus escaped through openings in the skin, and on cutting down the gland was found to be suppurating and separated from its surroundings except at one point. The treatment consisted in excision of the gland with perhaps those in the vicinity that were at all inflamed and packing with iodoform gauze. The wound usually healed in three weeks, and by the end of the month the patient was convalescent. In the true or virulent type of plague the suddenness of the fatal termination was most striking. When he first took charge of the plague hospital at Hong-Kong he was surprised to see the patients sitting up, talking, and smoking, some eating and a few sleeping, but still more so to find that during his round of 20 minutes four of the 25 patients in the ward had died, as did the whole of his first 50 patients within a few days. After discussing the incubation period, the mode of invasion, and the chief types he said that bubonic cases constituted 70 per cent. of the whole number, but that the septicæmic cases (in which there were no buboes though the whole of the glands were enlarged) and the pneumonic cases (in which they were unaffected, the lungs alone being manifestly involved) were far the more fatal. Mr. Cantlie described fully and in order the signs and symptoms common to all cases, which at first and apart from those connected with the lymphatic system were not characteristic, being such as were met with in all fevers of a severe or malignant type. Vomiting if persisting beyond the third day was an unfavourable sign. The vomit might have a coffee-ground appearance, not, however, indicative of hæmatemesis, though blood occasionally appeared in the stools. Diarrhœa was almost always present, but might be preceded by constipation. The enlargement of the spleen was very marked, often to the extent of three or four times its natural size, but that of the liver was less evident. The right heart was usually dilated, the apex beat was diffused, the sounds were short and feeble, a præcordial thrill was felt, and perhaps a systolic murmur was audible. In bubonic cases there were rarely any pulmonary symptoms, at any rate, prior to the fourth or fifth day, or till immediately before death. The urine was scanty and acid, typically febrile, but blood might be present, and albumin was frequently present in some epidemics though absent in others. Apathy and listlessness were the rule, but there might be delirium or sleeplessness or even a tendency to a purposeless wandering from the bed and perhaps from the house. Petechiæ and extensive subcutaneous hæmorrhages with sloughing of the skin over the buboes were frequent, but boils were rare, and so was a rash which, when present, resembled that of typhus. The poison of the plague seemed to expend its action especially on the lymphatic system. There might be only a single bubo, but the glands might be enlarged throughout the body. On the other hand, buboes might be numerous, those in the axilla and neck being attended by much œdema, even so great as to press on the larynx. Axillary and cervical buboes were very grave symptoms. The enlarged glands were always tender and might be extremely painful. In the septicæmic form the prostration was extreme, with delirium passing into coma, hyperpyrexia, and other symptoms of intense toxæmia and general enlargement of the glands, though no buboes were formed. In the pneumonic form the glands were in no way affected, but the lungs showed irregular patches of consolidation with frothy mucous expectoration frequently stained with blood. A bacteriological examination of the sputa revealed the true nature of what could not otherwise be distinguished from a severe catarrhal pneumonia. In all cases of plague the fever ran high, but the typical curve showed a double rise with an intervening fall to, or near, the normal on the third and fourth days. It was usually fatal on the fifth and sixth days, but might be so within 24 hours, or death might be delayed till the tenth or even the twelfth days. The diagnosis of a typical bubonic case was easy, but in the absence or before the appearance of these lesions certainty could only be attained by a bacteriological examination, especially in tropical countries where malarial, filarial, and relapsing fevers of severe types were met with. The plague was less fatal to Europeans than to Asiatics, and most so to the Mongolian race. Among Europeans in India and in the epidemic at Sydney it was from 30 to 40 per cent., among Hindoos from 60 to 70 per cent., and among Chinese from 85 to 95 per cent., or even higher. The prognosis in individual cases was well-nigh impossible, apparently mild cases often ending fatally and hopeless ones occasionally recovering. The worst symptoms were sleeplessness, delirium, coma, persistent vomiting or diarrhœa, renal or intestinal hæmorrhages, petechiæ, extravasations, and cervical or multiple buboes, while the septicæmic and pneumonic forms were very fatal. A return of the fever after the second fall, or the tenth day, was indicative of pyæmia and of fatal significance, whereas if a patient lived to the tenth day, was clear in intellect, and free from actively suppurating buboes his recovery might fairly be expected.

GLASGOW OBSTETRICAL AND GYNÆCOLOGICAL SOCIETY.—A meeting of this society was held on Nov. 28th.—Dr. Robert Jardine, the President, delivered an address on the Glasgow Maternity Hospital, Past and Present. He gave an account of the midwifery work carried on in Glasgow before the first maternity hospital was started. In the sixteenth and seventeenth centuries the work was largely in the hands of midwives. In those early days the Kirk looked after the morals of the midwives. From Dr. Duncan's Memorials of the Faculty of Physicians and Surgeons of Glasgow he quoted that one Kate Freeland was summoned before the Presbytery on April 4th, 1589, "to assr. for her professioun to be ane midwyfe qlk has not been knawin win ye toun and citie of Glasgow to ye inhabitatis yair, and to underly ye (censure ?) of ye Kirk according to her demerites." Dr. Jardine then pointed out that in 1740 the faculty had instituted an examination for midwives which was continued throughout the century. It was enacted that "after the 1st of January, 1741, any midwife who shall pretend as such to practise within the shyres of Lanark, Renfrew, Ayr, and Dumbarton without a licence shall be fined in the sum of forty pounds." Two-and-sixpence was the only charge made for the licence. It would thus be seen that the registration of midwives which has become such a burning question south of the Tweed was no new thing in Scotland. The first maternity hospital of which records could be found was a small private one started in 1791 by James Towers, surgeon. Mr. Towers afterwards became the first Professor of Midwifery in the University in 1815. In 1805 an attempt was made to found a public lying-in hospital, but it failed. In 1834 the Glasgow Lying in Hospital and Dispensary was founded by Dr. James Wilson. Dr. Jardine described the progress of this hospital and showed how it was being hampered for want of funds and by unsuitable accommodation. Epidemics of puerperal fever were common, but in spite of opposition the hospital struggled on until at length the present building was opened in 1881. He pointed out that the present hospital, although it might have been quite up-to-date 20 years ago, was now far from an ideal place in which to do the work which they were called on to perform. Not only was it too small, but there was neither an operating theatre nor an isolation ward in it, and the labour rooms were no larger than ordinary bedrooms. The operative work, he pointed out, had increased tremendously, quite tenfold, especially within the last decade. From 1834 to 1841, in the first hospital, 445 cases were treated. Of these, six were forceps cases (one in 74), two were cases of version (one in 222), and one was a craniotomy case (one in 445)—nine operations in all; while during the 10 years from 1889 to 1898 inclusive there were 4322 cases: forceps 650 (one in seven), version 154 (one in 28), craniotomies 112 (one in 39), inductions of labour 90 (one in 48), Cæsarean sections 56 (one in 77), post-mortem Cæsarean sections two (one in 2161)—1064 operations in all (one in four). In conclusion Dr. Jardine made a strong appeal to the Fellows of the society to make known the wants of the institution and he felt confident that if they

did so and if the public realised that the work was hampered for the want of proper accommodation funds would soon be provided for a hospital worthy of the great city of Glasgow. He closed his address with a short history of the different men who had held the appointment of chief physician in the past. The founder, Dr. James Wilson, and his son, Dr. J. G. Wilson, had been on the staff for nearly 50 years. Dr. Jardine also showed to the society a large number of interesting specimens and also all the newest instruments and apparatus employed in midwifery work.—On the motion of Dr. W. L. Reid a hearty vote of thanks was accorded to Dr. Jardine for his interesting address.

OTOLOGICAL SOCIETY OF THE UNITED KINGDOM.—At the annual meeting of this society held on Dec. 3rd, Sir William Dalby, the President, being in the chair, certain alterations were made in the existing rules of the society. The election of office-bearers for the ensuing year then took place.—Mr. A. H. Cheatle showed a patient suffering from Deafness, Perversion of Taste, and Facial Paralysis associated with Herpes.—Dr. W. Milligan considered the case to be one of peripheral neuritis probably of post-influenzal origin.—Mr. C. A. Ballance concurred with this expression of opinion.—Mr. C. H. Fagge showed a patient suffering from Bilateral Auditory Nerve Paralysis and suggested the diagnosis of intracranial tumour.—Mr. Cheatle asked as to the characteristics of the vertigo from which the patient suffered.—Dr. Milligan asked whether puncture of the lumbar theca had been performed and the fluid analysed. He considered that the symptoms, as detailed, did not warrant the diagnosis of intracranial tumour, but pointed rather to the existence of a chronic basic meningitis, possibly of syphilitic origin.—Mr. Fagge, in reply, said that no lumbar puncture had been performed and added that no history of either congenital or acquired syphilis could be ascertained.—Mr. Richard Lake showed a patient upon whom a Double Ossiculectomy for Chronic Suppurative Middle-ear Disease had been performed.—Mr. Cheatle asked how long the discharge had lasted and what was the original cause of the disease.—The President remarked that it was not always possible to foretell what the condition of the hearing power would be after the removal of the ossicles. The case shown appeared to be very satisfactory.—Mr. G. W. Hill asked whether Mr. Lake only practised ossiculectomy or whether he also curetted the attic, also whether Mr. Lake removed the outer wall of the attic under a general anæsthetic.—Dr. A. Bronner suggested the frequent insufflation of iodoform powder in such cases.—Mr. Fagge asked whether operation had been performed under local anæsthesia.—Dr. Milligan inquired as to whether any preliminary antiseptic treatment had been adopted.—Mr. W. C. Bull said that the case was not an instance of pure ossiculectomy, as in this particular case the outer wall of the attic had also been removed.—Mr. Lake, in reply, said that the discharge had lasted for 30 years and that the original cause was scarlet fever. In such cases he not only removed the outer attic wall but also curetted everything which he could. Preliminary antiseptic treatment had been tried for three months.—Mr. Herbert Tilley showed a patient upon whom the mastoid operation had been completed by multiple epithelial grafts.—Mr. Ballance pointed out that the patient could hardly be regarded as completely cured, as a considerable perforation still existed in the situation of the original membrane and as discharge was still present. He did not think that either tympanum or attic had taken the graft, as should be the case. He also considered it essential that all soft parts should be removed from the tympanum at the first operation in order to secure subsequent successful grafting.—Mr. F. C. Abbott related the history of a patient suffering from Primary Sarcoma of the Base of the Skull in the position of the Eustachian tube.—Mr. Ballance and Dr. Milligan demonstrated a new Portable Motor for surgical purposes especially designed for operation on the mastoid region. The motor was of about one-twelfth horse-power and ran quietly and steadily. The speed was regulated by a foot arrangement. The burr was attached to a steel flexible arm which enabled it to be used at a considerable distance from the motor. The hand-piece was detachable and in construction was simple, and was made so as to enable it to be thoroughly boiled for disinfection purposes.

NORTH OF ENGLAND OBSTETRICAL AND GYNÆCOLOGICAL SOCIETY.—A meeting of this society was held in the library of the Medical School, Leopold-street, Sheffield, on Nov. 16th, Dr. J. B. Hellier, the President, being in the chair.—The following specimens were shown:—Dr. J. W. Martin: Pyosalpinx removed by Abdominal Section.—Mr. Richard Favell: (1) A Ruptured Fallopian Tube from a case of Ectopic Gestation; (2) Double Pyosalpinx; and (3) Cast of Bladder from a case of Exfoliative Cystitis.—Mr. S. Rumboll: Epithelioma of the Clitoris.—Dr. Martin related a case of Acute Inversion of the Uterus in a primipara which had occurred spontaneously an hour after normal labour and was accompanied by great pain, hæmorrhage, and shock. Under chloroform 10 hours later the uterus was completely reduced by taxis, though not without considerable difficulty. The patient made an uneventful recovery.—Dr. T. B. Grimsdale related a case of Vesico-vaginal Fistula with Destruction of the Posterior Wall of the Bladder and Urethra which had occurred as the result of sloughing after labour in a primipara, aged 21 years, with contracted pelvis. A simple cloaca existed between the bladder and the vagina and the urethra had entirely disappeared. In the treatment two objects were to be obtained: (1) closure of the bladder, and (2) restoration of control over the urine. The bladder was first dissected away from the uterus up to the peritoneal reflexion. This fold was then brought down which materially reduced the size of the opening. At a later period the uterus was pulled down and fixed to the perineal muscles, so that by their contraction the cervix could be pressed against the symphysis and pubic arch, forming an obstruction to the escape of urine. The patient was now quite dry if she kept quiet, but urine escaped on exertion to any extent. No trace of urethra could be discovered. Dr. Grimsdale wished to elicit the views of members with regard to future treatment.—Remarks upon the case were made by Dr. W. J. Sinclair and Dr. A. Donald.—Dr. Hellier read a note on the Occurrence of Abortion. He had analysed the histories of 1800 married women who were out-patients at the Hospital for Women and Children at Leeds. These women had given birth to 6974 children, an average of 3·87 children each. They had had 1288 abortions—that is, one to every five and a half children. 1616 of the women had become pregnant; 184 were sterile. Of the 1616 58 only had had one or more abortions, but had never gone to term. Thus it followed that amongst a group of women in whom the frequency of abortion might be supposed to reach its maximum 96·5 per cent. of those who became pregnant, sooner or later, bore one or more children at term.—Dr. Sinclair read a paper on a Series of 10 Successful Cases of Cæsarean Section.

MANCHESTER MEDICAL SOCIETY.—A meeting of this society was held on Dec. 5th, Dr. T. C. Railton, the President, being in the chair.—Mr. E. Stanmore Bishop showed a patient from whom an Adenoma of the Sigmoid Flexure with the Intussusceptum which it had produced had been removed by Maunsell's operation after a preliminary colotomy. He remarked that the condition itself was not very rare, but that operators frequently attacked it through the dilated rectum. This was practicable enough if the growth was well within reach, but there were two definite risks in this method which became greater the higher the situation of the neoplasm. One was the possibility during the reduction of the reunited intestine—if the intussusceptum regained removal—of the tearing out or giving way of one of the sutures, which, when once the bowel had regained its normal position, would be out of range of either sight or touch, and septic peritonitis might be set up without much or any warning. Another was the necessity for fæcal matters to pass over the wound during the period of reunion and the consequent possibility of septic absorption. Both these risks were avoided by a preliminary colotomy which permitted a perfectly aseptic operation upon the bowel itself, whilst Maunsell's operation which he described gave a more perfect means of excision and reunion of the intussuscepted gut. The patient, specimen, and a microscopical section of the growth were shown.—Dr. R. T. Williamson briefly described a case of Melanotic Sarcoma of the Liver following a primary growth in the right eye. The patient was 16 years of age. The liver was uniformly enlarged and it extended from the fourth rib to the anterior iliac spine on the right side; there was no ascites. The urine gave the reactions for melanin. At the necropsy the liver weighed 13¼ pounds and was infiltrated with melanotic sarcoma at all parts. The kidneys and other abdominal and thoracic organs were unaffected. Remarks were added on the diagnosis of melanotic tumours of the internal organs and two other cases (previously recorded)

were referred to.—Mr. J. W. Smith read a paper on Clinical Experiences in South Africa which was illustrated by lantern photographs of a military hospital.

GLASGOW SOUTHERN MEDICAL SOCIETY.—A meeting of this society was held on Nov. 29th, Dr. William Watson, the President, being in the chair.—Dr. Ebenezer Duncan showed: (1) A case of Spinal Apoplexy; (2) a case of Acute Nephritis which had developed uræmic convulsions treated with benefit by blood-letting; (3) two Cardiac Cases with well-marked murmurs and no history of any previous rheumatic affection; (4) a case of Phthisis Pulmonalis in a soldier in whom the disease had developed in South Africa; and (5) a case of Diabetes Mellitus. In this patient benefit had been observed following the use of nitrate of uranium.—Dr. Alexander Napier showed: (1) A number of cases of Lupus Vulgaris in which very good results had been obtained by curetting and then cauterisation with the thermo-cautery; (2) a case of Jacksonian Epilepsy in a girl; (3) a case of Hemicrania in a boy; he read (4) a description of a fatal case of Glioma of the Brain; and further showed (5) a case of Peripheral Neuritis; (6) a case of Arthritis in a girl, running a rapid course; (7) several well-marked examples of Graves's Disease—in some the kidneys were freely moveable; and (8) some cases of Diabetes treated with Nitrate of Uranium.

Reviews and Notices of Books.

Indian and Colonial Addendum to the British Pharmacopœia, 1898. London: Printed and published for the Medical Council by Spottiswoode and Co. 1900. Pp. 59.

FOR many years it has been obvious that, whatever merits the British Pharmacopœia possessed, some of the preparations were not of universal applicability. Some would not bear exportation to India and the colonies, others which might be prepared locally would not yield satisfaction if compounded in strict accordance with the directions given in the British Pharmacopœia, and many could not with advantage be so prepared owing to the difficulty of obtaining some of the ingredients. Moreover, it was frequently felt that there were many local drugs which were used with greater facility, and although they could not be termed substitutes, since they did not possess precisely the same properties, yet in many of their more important actions they corresponded closely with drugs recommended for employment in Great Britain and Ireland. Although, therefore, in general the British Pharmacopœia could be followed in India and the colonies, there were many exceptions which indicated the need of some modifications for local requirements before the Pharmacopœia could be regarded as an authority, a standard, and a guide throughout the British empire.

In 1898 official recognition was extended to a small number of alternative substances and preparations, but many suggestions received from Indian and colonial authorities were held over for further investigation. The small volume at present under consideration is stated in the preface to be to a certain extent provisional. It is the first step in a new direction, and therefore it is introduced with becoming modesty, and it is frankly admitted that with regard to the sources, preparations, and properties of some of these drugs further research, especially in the countries in which they are found, is much to be desired.

The Indian and Colonial Addendum to the British Pharmacopœia, 1898, contains 54 drugs and 66 preparations. The names of eight or ten of the former are familiar; they are representatives of former pharmacopœias which still have a local reputation outside the British Isles, and it is quite possible, or even probable, that in the fresh condition they may possess properties which they lose when dried for transportation. The remainder of the drugs present us with new names, and it is interesting to see that the divisions of the empire within which each new drug now acquires official sanction are indicated. It is, perhaps, natural that numerically tinctures head the list of the new official preparations; there are, however, representatives of most groups with the exception of suppositories. Considering that the British Pharmacopœia, 1898, contains only three decoctions, it is somewhat remarkable to find no less than seven included in the Addendum. These can, of course, be only intended for local employment, but possibly some of the group of liquid extracts will find their way to this country and may be destined to play an important part; the liquid extract of bael will probably be welcomed by many practitioners, since the exclusion of bael from the British Pharmacopœia has often been regretted. It will be noted that bael is only official in the fresh state and that the liquid extract is prepared from the fresh half-ripe fruit, it can therefore be relied upon to produce results analogous to those observed in India. The influence of the last revision of the Pharmacopœia is further shown in the presence of several concentrated liquors, the relatively new process by which the time and labour of the dispenser have been saved. Those responsible for this compilation have been careful to follow the British Pharmacopœia in dosage, most of the official preparations having been prepared so as to permit of great harmony of dose.

The primary idea of this Addendum is to produce a standard authority adapted to Indian and colonial requirements, and it may be interesting to indicate some of the directions in which these remedies may be employed in the special places in which they now become official. In their actions and properties many of the plants are regarded as the local equivalents of drugs which are, or have been, official in the British Pharmacopœia, but it is, however, distinctly laid down that, with some few exceptions, they are not to be substituted by the dispenser or pharmacist; they must be prescribed by the medical practitioner on his own judgment. The list includes several astringents, some of the preparations being intended for local application—for example, acacia bark in place of oak bark (which is no longer official), butea gum in place of kino, black catechu in place of the official pale variety, myrobalans in place of galls, and sappan instead of logwood. The re-introduction of bael fruit, which possesses a great reputation for the treatment of diarrhœa and dysentery, has already been mentioned. The purgatives are relatively few, the chief being kaladana and turpeth, which resemble jalap in their action, and Indian podophyllum derived from Podophyllum Emodi. The anthelmintics include butea seeds which are used as the equivalent of santonin, and embelia which possesses some of the properties of kousso and of male fern. Although the bitter oil of the seeds of Indian azadirach is much used in India as an anthelmintic, the bark and the preparations owe their position in the Addendum to their tonic and antiperiodic properties, which have sometimes been considered to equal those of cinchona and arsenic. Other tonic remedies which are reported to possess antiperiodic properties are alstonia and tinospora; the latter, however, probably only acts as a bitter tonic like calumba, and the same may be said of coscinium; toddalia is thought to be the Indian representative of cusparia and andrographis that of chiretta. In the possession of emetic, diaphoretic and expectorant properties tylophora leaves have been ranked with ipecacuanha, and calotropis appears only to differ from the same drug in having greater action as an alterative. Cotton-root bark, which now becomes official over a very extended area, has been used largely in place of ergot. Grindelia and kava may be employed as anti-spasmodics, diuretics, and expectorants, while viburnum is not only an anti-spasmodic but also an astringent and

a diuretic. One of the most important additions is the recognition of mylabris, a dried beetle which is now official in India, in the African, and in the Eastern colonies. Mylabris yields a large proportion of cantharidin, and it will be noted that the new official preparations closely correspond with those in the British Pharmacopœia derived from cantharides.

In the foregoing notice we have only touched upon the more striking features of this Addendum, in which it will be obvious that a difficult task has been approached with caution and with tact. Doubtless many of the formulæ will require further adjustment before they are wholly satisfactory, but it is to be hoped that this will be effected by modifications of composition rather than by alteration of dose. Nothing has been said of the very full descriptions of the botanical characters; so far as it is possible to test these they appear to be extremely well one. Many of the descriptions, however, apply to fresh specimens and as the specimens of the dried plants sent to England often differ widely in character it will, perhaps, be safer to leave this subject to Indian and colonial criticism.

LIST OF SUBSTANCES AND PREPARATIONS IN THE INDIAN AND COLONIAL ADDENDUM TO THE BRITISH PHARMACOPŒIA, 1898.

Acaciæ Cortex
Acalypha
Acetum Mylabridis
Acetum Urgineæ
Adhatoda
Agropyrum
Alstonia
Andrographis
Aristolochia
Arnicæ Flores
Aurantii Cortex Indicus
Azadirachta Indica

Belæ Fructus
Berberis
Betel
Buteæ Gummi
Buteæ Semina

Calotropis
Cambogia Indica
Catechu Nigrum
Cissampelos
Coscinium
Cucurbitæ Semina Præparata

Daturæ Folia
Daturæ Semina
Decoctum Acaciæ Corticis
Decoctum Agropyri
Decoctum Cissampeli
Decoctum Gossypii Radicis Corticis
Decoctum Hygrophilæ
Decoctum Isphagulæ
Decoctum Sappan

Embelia
Emplastrum Calefaciens Mylabridis
Emplastrum Mylabridis
Extractum Acalyphæ Liquidum
Extractum Adhatodæ Liquidum
Extractum Agropyri Liquidum
Extractum Belæ Liquidum
Extractum Cissampeli Liquidum
Extractum Glycyrrhizæ Spirituosum
Extractum Gossypii Radicis Corticis Liquidum
Extractum Grindeliæ Liquidum
Extractum Kavæ Liquidum
Extractum Picrorhizæ Liquidum
Extractum Viburni Prunifolii Liquidum

Gossypii Radicis Cortex
Grindelia
Gummi Indicum

Hirudo Australis
Hygrophila

Infusum Alstoniæ
Infusum Andrographidis
Infusum Azadirachtæ Indicæ
Infusum Coscinii
Infusum Tinosporæ
Infusum Toddaliæ
Isphagula

Kaladana
Kaladanæ Resina
Kavæ Rhizoma
Kino Eucalypti

Liquor Andrographidis Concentratus
Liquor Aristolochiæ Concentratus
Liquor Berberidis Concentratus
Liquor Coscinii Concentratus
Liquor Epispasticus Mylabridis
Liquor Tinosporæ Concentratus
Liquor Toddaliæ Concentratus

Mucilago Gummi Indici
Mylabris
Myrobalanum

Oleum Ajowan
Oleum Arachis
Oleum Gaultheriæ
Oleum Graminis Citrati
Oleum Gynocardiæ
Oleum Sesami
Oliveri Cortex
Oxymel Urgineæ

Picrorhiza
Pilula Ipecacuanhæ cum Urginea
Pilula Urgineæ Composita
Podophylli Indici Resina
Podophylli Indici Rhizoma
Pulvis Buteæ Seminum
Pulvis Kaladanæ Compositus

Sappan
Succus Acalyphæ
Succus Adhatodæ
Syrupus Urgineæ

Tinctura Adhatodæ
Tinctura Alstoniæ
Tinctura Andrographidis
Tinctura Aristolochiæ
Tinctura Arnicæ Florum
Tinctura Azadirachtæ Indicæ
Tinctura Berberidis
Tinctura Calotropis
Tinctura Coscinii
Tinctura Daturæ Seminum
Tinctura Jalapæ Composita
Tinctura Kaladanæ
Tinctura Oliveri Corticis
Tinctura Picrorhizæ
Tinctura Podophylli Indici
Tinctura Tinosporæ
Tinctura Urgineæ
Tinctura Valerianæ Indicæ Ammoniata
Tinospora
Toddalia
Turpethum
Tylophoræ Folia

Unguentum Gynocardiæ
Unguentum Mylabridis
Unguentum Myrobalani
Unguentum Myrobalani cum Opio
Urginea

Valerianæ Indicæ Rhizoma
Viburnum.

Defects in Plumbing and Drainage Work. By FRANCIS VACHER, Medical Officer of Health of Cheshire. London and Manchester: John Heywood. 1900. 8vo. Price 1*s.* net.

IN all technical subjects the student has to acquire not only an exact knowledge of what to do, but also what it is desirable to avoid doing, and the book before us deals with this aspect of the plumbing question. The book is an enlarged edition of a work published some 10 or 11 years since, and describes various defects in plumbing and drainage work which came under the author's notice in his professional capacity since 1885, and is now brought up to the present time. The book is augmented with over 100 illustrations, but the bulk of the defects was chronicled in the first edition. The whole forms a most depressing record; in fact, it is in the nature of a gallery of horrors, which we would fain hope are rapidly being relegated to the limbo of ancient history. These defects may be mainly classed under four heads—viz., (1) defective planning of the sanitary system, arising from ignorance or total disregard of sanitary laws; (2) from practical incompetence on the part of the operative, leading to faulty pipe-joints and bad work generally; (3) from the sanitary appliances used being either faulty in design or construction; and (4) from a combination of two or more of the above.

The author points out that these defects have a tendency to repetition, yet we cannot but cherish the hope that the improvement in local by-laws and in the machinery for their administration, together with the great advance made in technical and general education both by the sanitary inspector and the operative plumber, will render any frequent repetition of the worst form of these horrors impossible. That this is so in the vicinity of London we feel sure, though in numbers of the older houses scattered throughout the country such defects are frequently to be found. The defects due to ignorance will doubtless disappear, though the process of evolution may be slow. With those due to disregard of sanitary laws it is different. The demand for cheapness, combined with cupidity on the part of those who cater to satisfy this demand, leads to systematic deception most difficult to combat, and some form of legislation to render those responsible for such fraudulent acts amenable to the law would seem to be desirable.

The book is to be commended as emphasising the enormous importance of the careful supervision of all such work and the great responsibility that rests upon those deputed to act as supervisors, whose posts are frequently inadequately remunerated, thus failing to secure the services of the best qualified men.

CHRISTMAS BOOKS.

MESSRS. BLACKIE AND SON send us (1) *With Rifle and Bayonet*. By Captain F. S. Brereton, R.A.M.C. With eight Illustrations by Wal Paget. 1901. Pp. 352. Price 5*s.* Captain Brereton, who is now at the front, has found time among very arduous labours to write an admirable book. The story deals with the events of the Boer War up to the occupation of Bloemfontein, and Jack Somerton, the hero, certainly does his share of fighting. Captain Brereton's style is easy and vivid and the book is an excellent present for a boy. (2) *In Far Bolivia*. By Gordon Stables, M.D., C.M. Aberd., R.N. With six Illustrations by J. Finnemores R.I. Pp. 287. Price 3*s.* 6*d.* The author takes his reader, to that little-known land, Bolivia. The story would make a good Adelphi melodrama, for we find a suffering heroine who is abducted by savages, a wicked uncle and his still wickeder solicitor, the hero, and his faithful savage attendant. All the bad people come to grief and all the good people are made happy, just as it should be but very rarely is. (3) *With Buller in Natal*. By G. A. Henty. Pp. 384. Price 6*s.*—In this volume Mr. Henty

has given us a most thrilling story, of which the relief of Ladysmith forms the theme. It will be read by young and old with much pleasure, for a brief account is given of every important action, from the battle of Glencoe to the series of operations that culminated in the rescue of Sir George White and his gallant force. The tale forms one of the most powerful stories from Mr. Henty's pen. The hero and his friends are British subjects resident in Johannesburg. When the war breaks out they escape to Natal and band themselves together under the title of "Maritzburg Scouts," and from first to last these "boy scouts" are constantly engaged in perilous and exciting enterprises, from which they always emerge triumphant. The book is well illustrated and is sure to give pleasure to boys all over the empire and cause them to anticipate the next war story already promised by the author.

MR. GEORGE ALLEN sends us *The Child's Picture Grammar*. By S. Rosamund Praeger. Price 3*s*. 6*d*. Grammar in general is a weary study, but Miss Praeger's delightful illustrations should make the way of learning a very primrose path. The illustrations are capital, especially those of the proper noun and of the preposition. The kitten in the latter is a gem of expression.

DIARIES.

MESSRS. RUDALL, CARTE, AND CO. again send us their admirable *Professional Pocket-book or Daily and Hourly Engagement Diary*. The diary is divided into three parts containing four months each, and although primarily intended for the musical profession will be found no less useful for busy persons of other callings. The four-monthly parts have paper covers and the whole is enclosed in a neat leather case.

MESSRS. JOHN WRIGHT AND CO. of Bristol forward to us two issues of their *Visiting Lists*. One is marked A and the other B. Form A has fixed dates, while form B, called perpetual, has not, so that the list may be begun to be kept at any time of the year. The price of either is 5*s*. 6*d*. and they are strongly bound in morocco.

Analytical Records
FROM
THE LANCET LABORATORY.

TOBACCO (CRAVEN MIXTURE).
(J. J. CABRERAS, 7, WARDOUR-STREET, LONDON, W.)

THIS is a somewhat coarsely cut tobacco containing cavendish in association with pure bright Virginia leaf. The result is a blend which is quite cool-smoking in the pipe. On analysis the ash yielded normal results, there being no excess of chlorides which interfere with the convenient combustion of the leaf. We could trace no objectionable flavouring agents or added sticky substances which are so often present in order to give "substance," as it is called, to the leaf. The mixture is a blend of pure tobacco leaf, the proportion being such as to render it free from acridity and heat when smoked in a pipe.

(1) FORMIC SULPHUGATORS; AND (2) FORMITAS.
(THE SANITAS CO., LIMITED, BETHNAL GREEN, LONDON, E.)

The "Sulphugator" is designed to utilise the disinfectant properties of both sulphur dioxide and formaldehyde. In one form of the appliance a sulphur candle occupies a central space surrounded by a porous material containing formalin. As the sulphur candle burns the heat evolved drives formaldehyde from the porous jacket and thus both formaldehyde and sulphurous acid gas are evolved. In another form the "sulphugator" consists of three containers, the inner one being charged with formalin and surrounded by a sulphur candle. Outside the sulphur candle is a space for containing water or a solution of formaldehyde. Thus, steam, sulphurous acid gas, and formaldehyde vapour are simultaneously produced. These appliances seem admirably adapted for disinfectant and fumigating purposes. They should act also very effectually in destroying insect pests and other objectionable creeping things in stables, kennels, railway-trucks, &c. We have also examined a preparation known as "Formitas," a mixture of sanitas fluid and formaldehyde. It is a very pleasant combination of antiseptics in which the agreeable smell of sanitas predominates over the much less agreeable smell of formaldehyde. The mixture is doubtless an efficient disinfectant.

TIT-BITS BAKING-POWDER EXTRACT.
(A. BROWNING, 25, FINCHLEY-TERRACE, MURCHISON-ROAD, LEYTON.)

We found nothing novel in the composition of this so-called "extract." It contained the usual ingredients of an ordinary baking-powder, which interact when moistened with the production amongst other things of carbonic acid gas. A little starch is added to keep the powder dry. The materials employed are pure and we could find no objectionable reagents present, such as alum.

NARGOL.
(PARKE, DAVIS, AND CO., 111, QUEEN VICTORIA-STREET, LONDON, E.C.)

Nargol would appear to be the newest chemical compound of silver and nucleinic acid. It is a fine, perfectly dry, brownish-white powder, easily soluble in water. It combines the bactericidal properties of an ordinary silver salt with at the same time the quality of not being rendered inert on coming into contact with albuminous substances. It is employed in genito-urinary diseases, it is stated, with decided advantage over silver nitrate, and is said to be free from irritating properties. It has also been used in ophthalmic, laryngological, and gynæcological practice. It may be regarded as a definite and soluble silver albuminoid.

New Inventions.

A SUBSTITUTE FOR BEER-BOTTLES.

WE have received from the Kannenbeer Company, Limited, of London, a specimen of a jug which they propose should be adopted instead of the ordinary bottle. It is made of stone ware and provided with a hinged lid fitted with an india-rubber washer. The lid when shut down is kept firmly closed by a metal clamp. The jug is glazed within and without and is obviously very easy to clean. The company claim that the exclusion of light will keep the beer in better condition than is possible in the ordinary bottle-glass bottle. The lid also being air-tight will, it is alleged, enable only a portion of a jugful to be used at one time, while the remainder can be sealed up and used later in good condition.

A BENEFICENT GIFT.—Lord Mount-Stephen has intimated to Lord Provost Fleming of Aberdeen that he is about to remit a cheque for £25,000 to discharge the debt on the Aberdeen Royal Infirmary. In 1846 his lordship was a patient of the infirmary.

COLD ASH CHILDREN'S HOSPITAL, SOUTH BERKSHIRE.—On Dec. 8th the foundation-stone of additional buildings, to be erected in connexion with this institution, was laid by Mrs. Palmer, wife of Mr. G. W. Palmer, M.P. for Reading. For some years the hospital has been successfully conducted under the direction of Miss Bowditch, at Cold Ash, where many crippled London children have been treated. Towards the outlay for the new works Mr. Palmer has contributed £200.

THE LANCET.

LONDON: SATURDAY, DECEMBER 15, 1900.

THE General Medical Council sat for eight days at its recent autumn session, three of which were mainly occupied with penal cases. Among the other important subjects which occupied the time of the Council were the new rules for obtaining diplomas in public health, the question in dispute between the Royal Colleges of Physicians of London and Surgeons of England and the General Medical Council, and the financial position of the Council. Besides these there were 30 or 40 other questions upon which the Council had to deliberate, so that even while we think that the Council occasionally spends too much time over its discussions, we admit that the discussions have to cover a great deal of ground. Sir CHRISTOPHER NIXON in the debate on the issues between the Royal Colleges of Physicians of London and Surgeons of England and the Council displayed a natural dissatisfaction with the powers of the Council. "The profession," he said, "look to this Council to secure uniformity of action among the medical authorities of the United Kingdom, and it should not be shown to them that after all the Council had only the power to express pious opinions." Sir CHRISTOPHER NIXON was well supported in his view by the majority of the Council who were resolved to adhere to their resolution on this subject. Members of the Council who spoke in this sense must have known that by adhering to a resolution which they have no means of enforcing, they were not advancing by one hair's breadth the adjustment of this unhappy difference. We ask the Council to be strong, but it must recognise that occasionally agreement to a compromise is the only way out of an *impasse*. It is a serious thing for the Council to demonstrate, not its power of securing uniformity, but its helplessness—which is what may be done by overstating its authority.

If the determination of the Council to adhere to its resolution means no more than to exclude from the Students Register of the Medical Council all who satisfy the two Colleges as to the efficiency of their education in the fundamental sciences, it is difficult to understand who is to get any satisfaction out of so barren a result. It is not pretended that registration on the Students Register can be enforced on students, or that it is necessary as a preliminary to medical education or to the acquisition of a medical qualification from any of the bodies. To compel applicants for registration on the Students Register, who have already satisfied the two Colleges, to encounter trouble and delay is only likely to irritate the students and the Colleges, to place the Council in an unenviable position, and to deprive the Students Register of a large number of students. The Council must, in our opinion, either go further and promote a large scheme for insuring uniformity of education or it will have to agree to some *modus vivendi*. We do not admire the unbending attitude of the Colleges, or the tone and style in which the case between them and the Council is stated. Their own representatives in the Council voted against the proposal to try to find an amicable settlement of the points in dispute, though this was the very suggestion of their legal adviser. It is easy to see that the recognition of schools as medical schools may be open to abuses. But, on the other hand, the Royal Colleges of Physicians of London and Surgeons of England appear to have taken much trouble to ascertain the equipment of the schools which they have recognised, and to have reason to believe that many of them are more efficiently provided with the means of teaching chemistry, biology, and physics than are some of the medical schools. The General Medical Council has not the means or the time to satisfy itself on this subject. It is difficult to understand how it can proceed to approve or to disapprove of institutions which it has no means of inspecting properly. Though counsel on both sides may agree, it is still doubtful if the Council can compel the licensing bodies to comply with the requirements and recommendations contained in its resolutions with reference to the course of preliminary study to be gone through by students. Under these circumstances we can only impress on both parties the obligation to give and to take a little. Both sides should attempt, and attempt quickly, to find some means of upholding the influence of the General Medical Council without detracting from the individual responsibility of separate medical authorities.

We cannot help feeling that the General Medical Council in its individual capacities loses sight somewhat of its responsibility as a whole, which is towards the public and the medical profession, and not towards a group of universities and corporations. We think our feeling must be shared by Dr. PYE-SMITH. Dr. PYE-SMITH, who is always listened to with much respect in the General Medical Council, expressed the opinion at the late meeting that the Council would never do its best until it was reduced in size to one-half of its present number and until the reporters were excluded. The first part of Dr. PYE-SMITH'S forecast is flattering to us, for we have always held that the Council is too large; the second part is not flattering to his colleagues in whichever way it is regarded. There is, however, no chance of the Council being diminished in numbers at present, for as the direct representatives require to be increased, and not diminished, in numbers the only way that diminution could be effected would be by depriving certain universities and corporations of a separate voice. In some directions this might be a reform, but there is no tendency towards it. In spite of the conjunction of the Royal Colleges in the three divisions of the Kingdom each body likes to assert distinctness and individuality at the General Medical Council. There is unhappily no sign of conjunction of universities in any division of the kingdom even for examination purposes. Each body requires its separate mouthpiece and Parliament is not likely to alter the privileges that are now enjoyed by any of them. And we should oppose the exclusion of the reporters as a backward step. There may be members of the Council who speak for the sake of being reported, but the utility of the Council should not be made to suffer for the vanity of a few. The Council is a public body. It has the enormous power of erasure from the Register and it

is of the utmost importance that proceedings attending such erasure should take place openly, for the instruction of the public on the one hand and to give fair play to the accused on the other. The Council has great duties in relation to education and must express opinions on measures of legislation having medical bearings, in regard to all of which publicity of statement may be of the greatest importance. The members of the medical profession are entitled to know the views and the proceedings of a Council which they support with their fees and which orders their education and conduct. The public have at least an equal right to know what measures are being taken to keep medical education up to a proper standard and to supply an accurate register of qualified medical men.

THE epidemic of peripheral neuritis which was traced to the consumption of beer containing arsenic is, we hope, in process of being arrested. Its causes, so far as they may depend on the use in brewing of glucose or "invert" sugar prepared with impure sulphuric acid, have been traced, and in all parts of the kingdom medical men are on the alert to detect and deal with new foci, while the publicity given by the press to the matter as one of widespread interest and obvious emergency has helped to avert the danger. Fresh cases have, however, been announced since our last issue, whilst several inquiries held by coroners have brought into prominence a question which may come before any of our readers in the near future—Who, if anyone, is liable to compensate those who have lost relatives by death? This is a most important point where those affected are from the nature of the case largely drawn from the wage-earning class. It will be well that medical men should make themselves to some extent familiar with the law in relation to the occurrences.

Some persons have apparently lost their lives through drinking beer containing arsenic, and it need hardly be said that where a person's death is caused by the wrongful act, neglect, or default of another, and the injured person, if he had lived, could have maintained an action, Lord CAMPBELL'S Act enables relatives within certain limitations to recover compensation for their loss. The recent epidemic seems likely, therefore, to produce a large number of such claims; but the alleged facts upon which they will be founded are without any close parallel, and if the liability is seriously disputed by those whom it is sought to make esponsible, some time may elapse before it is fully established. Yet, if we may hazard an opinion on so debateable a topic, it seems reasonable to suppose that someone will be found liable to pay compensation in some cases, while those seeking it will direct their efforts against the brewers with the best chance of success. Possibly some difference may arise between publicans selling in "tied houses" and those who do not, but we may assume that the public-houses for the most part will be found to have been "tied," a circumstance which needs no definition, but which results in the publican being virtually the agent of the brewer, or in any case in his selling a beer the source of which is well known to the consumer.

The brewers have hitherto met the emergency with every effort to abate the evil, and it is probable that they will also show a conciliatory spirit if threatened with litigation, but the door to unfair or mistaken claims is a very large one, so that the brewers must not be blamed if they take every step to protect themselves and to sift the statements of those who may proceed against them. It will be seen at once that the purely medical evidence may be of enormous value to persons making a claim upon the brewers, while the evidence of medical officers of health, public analysts, and borough chemists may be of equal importance. The claimants will, presumably, have to show that the person affected died from, or exhibited symptoms clearly indicating, arsenical poisoning; that such person drank beer from a certain public-house; and that samples of beer from that public-house contained arsenic in quantities sufficient to account for the symptoms complained of. It will hardly be necessary to go through his dietary to show that he did not get the arsenic in any other way; that will be a matter for the defendants to prove if they allege it. The kind of scientific evidence that plaintiffs will require is shown by the communications that have appeared in our columns, and every medical man who finds himself confronted with what he believes to be a case of arsenical poisoning from beer-drinking must be prepared to give in a court of law similar information concerning his patient.

The report by Professor SHERIDAN DELÉPINE and Mr. C. H. TATTERSALL[1] says: "Every case we have followed up (about 100) can be traced to beer in the brewing of which glucose or sugar from one manufactory was used." If the arsenic can be traced as far back as the brewer it will scarcely be necessary to follow it further, although the brewer may ultimately have a remedy against the person who supplied him with glucose, while the manufacturer of glucose may in his turn some day maintain a claim against the person from whom he bought his sulphuric acid. Much will presumably turn in all such cases on the amount of knowledge on the part of the vendor of the purposes for which the thing sold was to be used. If anyone is sued for damages in consequence of the epidemic which we are now considering, whether he be publican, brewer, manufacturer of glucose, or manufacturer of sulphuric acid, he will be sued on one of two grounds—either because he sold something with a warranty, express or implied, that it was fit for its purpose (in which case should it prove unfit he would be liable whether negligent or not), or because having a duty towards his purchaser he neglected that duty. Let us take first the case of the publican. It appears from decided cases, the principal ones[2] arising out of the sale of diseased meat, that there would be no implied warranty at common law by him that the beer was wholesome, and the 14th section of the Sale of Goods Act, sub-section 1, does not seem to affect the ordinary sale of beer to a customer in a public-house. It apparently imports a warranty only where the buyer relies on the skill and judgment of the seller—a relation which does not seem to exist where a customer calls for a pot of beer in a public-house. Nor can a publican be reasonably held to be negligent because he does not know that the beer which he retails, but does not make, contains a

[1] THE LANCET, Dec. 1st, 1900, p. 1603.
[2] Emmerton v. Mathews, 7, Hurlstone and Norman's Reports, 586; Ward v. Hobbs, 4, Appeal Cases, 13.

minute but injurious quantity of arsenic. There can hardly be a duty incumbent upon him to make the inquiry or to have the knowledge necessary for such a discovery. With regard, however, to the brewer the case is different. Like the publican, he knows that the beer is going to be drunk by human beings. Like the publican, he may not be held to warrant it wholesome, which would make him civilly liable if some murderous assistant were to poison it wholesale. But it is at least arguable that he should know the chemistry of his trade and that the chemist whom he employs should have his mind directed to all possible, as well as obvious, dangers. The use of glucose and "invert" sugar is of comparatively modern date. The employment of these substitutes has provoked much comment and remonstrance. The brewers who have introduced these ingredients into beer have done so for their own convenience, and it may well be urged against them that it was their duty to see that the chemically obtained sugars which they bought were pure. The danger of arsenical poisoning may not have been pointed out to them in terms by their critics, but it was they themselves who maintained that the new system of brewing was wholesome, and it was their business to see that it was so.

IT was recently decided by the board of management of the National Hospital for the Paralysed and Epileptic, acting upon the advice of the Lord Chancellor, one of their body, that an inquiry into the management of the hospital should be held by the Right Hon. Sir FORD NORTH, a retired judge of the High Court. We announced this last week. Sir FORD NORTH'S inquiry was to be directed towards obtaining information for a report upon the allegations made by the medical staff concerning (to quote the terms of reference): "(*a*) the diet of the patients; (*b*) the condition, care, and treatment of the patients; and (*c*) the nursing of the hospital—brought forward, under the headings above quoted in the statement, dated May, 1900, issued by the medical staff to the governors on or about June 16th, 1900." As soon as the terms of reference of Sir FORD NORTH'S proposed inquiry were made known the medical staff of the hospital decided that they could not recognise the court. Sir FORD NORTH, they pointed out, had been invited to make his investigations solely by one of the parties to the controversy—namely, the board of management; and, secondly, the scope of the inquiry was limited to the domestic conditions of the hospital and appeared to exclude from consideration the all-important topic of the constitution of its management. The attitude thus taken up by the medical staff was absolutely consistent with the position that they have occupied throughout. They have asked for inquiry, but for inquiry into all the matters at issue between themselves and the board of management. An investigation of certain charges which they considered it their duty to make many months ago will form part of such an inquiry, and not the least important part. But when the board proposed, instead of a thorough investigation of the whole situation between the two parties, a limited inquiry, to be conducted by a court of their own appointment into one side issue, the medical staff very properly refused to have anything to do with the matter. We now learn that Sir FORD NORTH'S proposed inquiry has been adjourned *sine die*, and we may be permitted to wonder what the board of management ever expected to take by such an inquiry. We have every desire to credit both sides of this unfortunate controversy with good faith, therefore we must suppose that the request to Sir FORD NORTH to obtain information for a report upon the accuracy of the statements placed before the governors of the hospital last May by the medical staff was made with the belief that such a partial inquiry would meet the case. But while we credit the board of management with an honest attempt at reform we cannot compliment them upon their sagacity. They had before them the clear and reiterated statement of the medical staff that they would have nothing to do with a partial inquiry, so that the refusal of the medical staff to recognise Sir FORD NORTH'S court was only to be expected. And if in spite of this refusal the inquiry had been held, in what way would the report have been conclusive? Quite apart from the fact that the most important witnesses would have been absent, Sir FORD NORTH, a learned lawyer, is not an expert on hospital feeding, on nursing, or on sanitation; he was provided with no medical assessor; and he was invited to discharge his unenviable duty by one party—the accused party—to a controversy. No practical purpose whatever could have been served by such an inquiry. To put it bluntly, if the report of Sir FORD NORTH had been a favourable one it would have been regarded as a whitewash. The only satisfactory mode of settlement is the appointment of a perfectly independent committee with a free hand to inquire into all the points at issue between the medical staff and the board of management, together with the admission of representatives of the staff to the board.

Annotations.

"Ne quid nimis."

THE SANITATION OF BARGES.

THE last issued half-yearly report of the medical officer of health of the Port of London, a valuable if somewhat belated document, deals in some detail with the sanitary conditions which obtain on the "dumb craft" which do so much of the carrying trade in the lower Thames. These craft are said not to be inhabited because the men who navigate them do not, or at any rate are not supposed to, sleep on board. The owners of the vessels plead that it is unreasonable to expect that they should be fitted up with sleeping accommodation, because they do not wish the men to sleep during a voyage, and if the crew remain on board when the vessel is moored it is for the purpose of keeping watch over the cargo, and therefore facilities for sleep are distinctly contra-indicated. The owners state also that as the men who work these craft are constantly being changed it would be practically impossible for them to exercise due supervision over a sleeping cabin and that they would therefore be constantly put to great expense in the cleansing and repair of the place. There is perhaps less in this contention than in the former one, although Dr. W. Collingridge, the writer of the report, who is intimately acquainted with the practical working of all river craft, considers that it is not unreasonable that the barge owners should altogether

object to provide sleeping accommodation on board. He insists, however, that "a clean, weather-tight, well-ventilated cabin, provided with a stove suitable for warming and cooking purposes," ought to be provided in all cases. With this recommendation we cordially agree. It is part of the duty of the Port Sanitary Authority to keep all river craft under constant supervision, and when it is found that one is in so insanitary a condition that it can be classed as a nuisance an order under the Public Health Act is served and measures are usually taken at once by the owner to abate the nuisance. This method of proceeding, however, is found not to be adequate, for there are many cases in which cabins are undoubtedly unfit for their purpose and yet fail perhaps to reach the point of being "nuisances" within the meaning of the Act. As everyone who has sailed much on the lower Thames is fully aware, a large number of barges are used for carrying offensive cargoes, such as manure and house and manufacturing refuse, and the river is undoubtedly the best channel by which the refuse of London can be removed, and as the prolonged retention of such offensive matter would be injurious to the community the more rapidly it can be got rid of the better it is. It follows that no unnecessary restrictions should be put upon this trade, but it is necessary that the process of removal should be done as far as possible in such a way as to be injurious neither to the general public nor to those engaged in the work. It is well that the efficient by-laws which have been made for the protection of the public are generally obeyed. During the half-year under review, however, the owners of 11 barges were summoned for neglect in carrying out the by-laws and in each case a fine was imposed. The by-laws at present in force have, unfortunately, no reference to the health of the inhabitants of the barges. The craft which carry refuse are constructed without any attempt being made to prevent the foul gases which arise from the cargo from passing into the cabin, and, as a rule, old barges are used for the trade. Dr. Collingridge points out that to ensure the purity of the air in the cabin it is necessary that the barges should be constructed with a double bulkhead, that there should be a space between the bulkheads, that this space should be freely open to the air, and that a pump should be provided to free it from foul fluids. These precautions, he urges, are inexpensive and easily practicable. They should be made compulsory. We entirely agree with this recommendation, which would do no more than enforce a necessary sanitary provision which is already enforced in the case of all canal boats.[2] There can be no reasonable doubt that the unhygienic conditions which exist on barges have a deleterious effect on the crews. The Thames bargee is not generally considered to be a delicate person, nor is his appearance usually that of an invalid—it might, indeed, be difficult to convince an intelligent English jury that men of the physique of the bargee are living under insanitary conditions. As a fact, however, the state of the barges has been so noxious in some cases that death has undoubtedly resulted from a neglect of the structural conditions which have been indicated as necessary in the case of vessels carrying foul cargoes. Dr. Collingridge quotes two cases which are absolutely convincing on this point. These cases are briefly as follows: On Jan. 30th, 1900, a ketch was found off Silvertown. On examining the cabin the inspector found the master and his wife both dead. They had been suffocated by the fumes of the cargo, which was "saccharine scum," a substance which gives off large quantities of carbonic acid gas, the inhalation of which was proved by the medical evidence to have caused the deaths. The second case occurred on July 30th, 1900, when two men were found dead in the cabin of a sailing barge. The cargo consisted of market and dustbin refuse in a state of decomposition. At the inquest the medical evidence proved that death was caused by asphyxia due to gases given off from the cargo. An examination of the barge showed that there was a free passage through which the foul air could pass from the hold to the cabin. In this case the jury recommended that "barges conveying manure and other impure cargoes should be specially constructed." Dr. Collingridge advises that a by-law should be framed similar to the regulations in force in the case of canal boats. We entirely agree with the importance of this recommendation and see no reason for delay. We therefore earnestly commend the matter to the consideration of the Port of London Sanitary Committee and to the President of the Local Government Board.

[2] Regulations of the Local Government Board under Canal Boats Act, 1877 (47 & 48 Vict. c. 75), March 20th, 1878.

ARSENIC IN WHISKY?

IT was certain that there would be a tendency to exaggerate the possibilities of evil arising from the recent revelation of arsenic being found in the sugar used for brewing beer. After all, it is but natural to wonder whether arsenic might possibly gain entrance into preparations other than beer, which either contain glucose or are a product of its fermentation. Thus sweetmeats, golden syrup, honey, jam, and, lastly, whisky have fallen under suspicion. It is gratifying to know that so far, although a great number of analyses have recently been made, arsenic, at any rate in London, has not been found in the first four. It is fairly certain that artificially derived sugar is employed in the production of spirits and the question remains to be answered whether if there were arsenic in the sugar it would pass into the spirit on distillation. All spirits, of course, are distilled. We have this week conducted a simple experiment which shows that arsenious acid does not pass over with spirit in the still. Indeed, if a spirit contained arsenic in the form of arsenious acid the latter could be easily separated in this way. We placed a few ounces of whisky in a small still with about 20 grains of white arsenic or arsenious acid and then proceeded to distil the mixture. In spite of the very large poisonous quantity of arsenic in the still not a trace of arsenic passed over or could be detected in the rectified spirit. The whole of the arsenic was left behind. According to this experiment, therefore, no fear need be entertained of arsenic occurring in whisky, though the poison may be present in the sugar substitute employed. This experiment was undertaken because it had been reported that some of the cases at Manchester and Shoreditch occurred in regard to patients who had not been beer-drinkers but whisky-drinkers. We have neither received nor heard of any confirmation of these cases. In regard to the epidemic of arsenical poisoning by means of beer we are glad to note that the Local Government Board is addressing a circular letter to local authorities recommending them to cause samples to be analysed both of beer and of other articles of food in which glucose and similar substances are used. Last week in an annotation upon the subject we wrote: "We venture to suggest that a special Government order should be issued instructing all county authorities to institute an analytical inquiry in their districts." We are glad that the action herein intimated is to be definitely taken.

ALLEGED "CONSUMPTION CURES."

SOME prominence has recently been given in the lay press to another alleged cure for consumption. We regret that the correspondence was taken part in by a medical practitioner who wrote that he had used the "remedy" in a large number of cases with great success. Such a statement in a daily newspaper cannot be too strongly deprecated, as it amounts to advertisement pure and simple. If any form

of treatment for any disease has given satisfactory results it is only just that such therapeutic measures should be made known, either through one of the medical societies or in the columns of the medical press, but when published in the daily press it can only tend to bring discredit both upon the treatment itself and upon the practitioner who seeks such channels to make his name known. The drug, which is claimed in this instance as a "new remedy," is arsenic or one of its derivatives. Two names are associated with the drug through no fault of their owners—namely, Professor Armand Gautier and Dr. Hoff of Vienna. Arsenic has been used in the treatment of pulmonary tuberculosis in this country for a number of years, consequently there is nothing "new" in its employment. Different authorities use varying doses, and it is well known that tolerance of the drug is generally speedily established—witness its use in chorea and children can without inconvenience take 15 minims of Fowler's solution three times a day if the dose is slowly increased and the patient is carefully watched. One preparation of arsenic is comparatively new—namely, cacodylic acid, and it is claimed that the drug can be pushed to its full action more conveniently by this means than by employing the preparations in ordinary use. Cacodylic acid is arsenic acid in which two hydroxyl groups are replaced by two molecules of the methyl group. Our object, however, is to protest against its use being exploited in the lay press, although, as already stated, the two authorities whom we have mentioned are not in any way to blame for the prominence which has been given to their names. Frequent references have been made to the drug in previous issues and a list of references will be found in another column.

A RECENT DEVELOPMENT IN ADVERTISING.

So far as its own members are concerned the medical profession in this country remains true to its ideals and abhors the practice or permission of advertisement. It needs no deep thought to discern the degradation into which a learned profession must inevitably sink if once success in its ranks comes to depend less upon the merits than upon the advertising powers, the immodesty, and the assurance of its members. Yet while medical men thus refuse to be active participators in advertisement there is no class, we suppose, more persistently victimised by advertisers of all kinds. What practitioner's waste-paper basket is spared for a day even from elaborate circulars describing the particular merits of some outrageously-named drug or from presentation copies of periodicals whose pages present articles that are but the thinly disguised advertisement of a patent medicine or a proprietary hygiene establishment? We mention the waste-paper basket, but no man's basket alone can cope with the advertisements that reach him through the post. He must have, in addition, some repository for the more substantial waste that is showered upon him. Bottles of mineral waters from all corners of Europe and America, little boxes of substances that represent the latest enterprise in making medicines palatable, ointments, lotions, biscuits, and extracts, all alike reach the medical man who neither requests nor desires this bewildering accumulation. It may be urged that beyond some domestic inconvenience this prolific advertisement does the medical man no harm and occasionally perhaps even leads him to notice a useful preparation that he might otherwise have missed. Unfortunately, however, advertisement even without encouragement will not stop short at the comparatively harmless methods we have alluded to. The success of advertisement from the commercial point of view is undoubted. Consequently, advertisers are ever on the alert for some new means by which to catch the eye or to arrest the attention of probable customers until, without ever actually transgressing the laws of bribery and corruption, methods are practised that cannot fail to damage the self-respect of any who may allow themselves to be practised upon. We have no fear that such a bait as the "Craigside Hydro, Llandudno," holds out to the medical profession will be readily swallowed, but as an example of an evil and perhaps new method of "pushing a concern" we are glad of the opportunity of alluding to these matters that a correspondent puts in our way. This gentleman, as well as no doubt many others, received together with a brochure relating to the Craigside Hydropathic Establishment a coupon the presentation of which will be accepted in payment of account for three days' stay at the "hydro." Such benevolence on the part of the institution has only one significance. It says in effect, "We will pay you for a three days' holiday here, afterwards send your patients who will pay us." We know nothing of the establishment in question; it may be, and very likely is, in every other way admirable, but of this we are quite certain, that such a means of advertisement as we have described, so far from recommending its object to medical men, will only arouse their suspicions and delay them from seeking its benefits either for themselves or for their patients.

ATROPHY OF THE MUSCLES OF THE SHOULDER AS AN EARLY SIGN OF PHTHISIS.

AT the meeting of the Société Médicale des Hôpitaux of Paris on Oct. 26th M. Emile Boix called attention to an early sign of phthisis which has not received much attention—atrophy of the scapulo-thoracic muscles on the affected side. In advanced cases, of course, such atrophy is well recognised. M. Boix relies on inspection and palpation rather than on measurement to detect slight differences between the two sides. Inspection of the shoulders both from the front and the back must be carefully carried out in a good light. If necessary it may also be performed with the patient lying down, both on his abdomen and on his back; or better still, the patient may be seated. Palpation will corroborate the evidence derived from inspection. With the tips of the fingers the thickness, consistency, and elasticity of the muscles are appreciated and at the same time the habitual tenderness—a sign of the first importance—is discovered. The difference between the two sides can also be appreciated by pinching between the fingers the fleshy mass above the clavicle and spine of the scapula. M. Boix finds that in phthisis muscular atrophy is more marked on the side in which the lesions are more advanced and is unilateral if the lesions are unilateral. Even when the subject is very emaciated a difference between the two sides will be found in the volume and consistency of the supra-spinatus, trapezius, and pectoral muscles, and sometimes of the deltoids. Muscular atrophy is an early sign, but is not a primary sign, of phthisis. Its value consists in that it draws attention to the affected apex and confirms the diagnosis at a time when only modified respiratory sounds without adventitious sounds are present and the disease can only be suspected. The atrophy in advanced cases affects more or less generally the muscles of the shoulder; in the beginning, on the contrary, it is partial. Sometimes the supra-clavicular hollow is more pronounced on the affected side, sometimes the sub-clavicular plane is retracted, and sometimes the supra-spinous mass is less full than on the other side. A source of fallacy is that the muscles of the left shoulder are generally less developed than are those of the right; but a perceptible difference, especially in the form of the "partial" atrophy described above, constitutes a presumption in favour of phthisis. The fact that the right side is generally first affected or most affected in phthisis increases the value of the symptom of muscular atrophy. As to the

pathology of this condition it seems to be analogous to muscular atrophy of arthritic origin. The following cases are examples of its value as a symptom. Case 1.—A man, aged 38 years, complained of cough and loss of flesh. At the left apex there was slight dulness, inspiration was jerky, and expiration was prolonged. In spite of the general emaciation palpation revealed a marked difference between the two supra-spinatus muscles; the left was much more atrophied than the right. The tuberculosis made rapid progress and ended fatally. Case 2.—A woman, aged 44 years, came under observation. A year previously she had had abundant hæmoptysis. At the right apex respiration was scarcely prolonged, and at one point in the supra-spinous fossa fine sub-crepitant râles were heard. On the left side the supra-spinatus muscle was in well-marked relief; on the right the supra-spinous fossa was flattened. The sub-clavicular and supra-clavicular fossæ were more marked on the right side than on the left. A year later there were signs of extension of the pulmonary disease, but the appearance of the muscles remained the same.

A WORD OF SYMPATHY.

"IT takes the blood of the men and the tears of the women." So said one of the greatest-minded and most tender-hearted of men in a well-known passage upon War. The conflict now raging in South Africa has brought sorrow to many a household. All hearts went out to the veteran commander now on his way home when he lost his sole surviving son at the hour when he won the coveted decoration which the father also wears. And now a similar and, if possible, greater sorrow has fallen upon a member of our own profession—Dr. Charles Parsons of Dover. Two sons did he give to the service of his country—Lieutenant Francis Parsons, killed at Drelfontein, whose gallantry had gained him the V.C.; and Courtenay Parsons, who went as civil surgeon attached to the 21st Field Hospital, and who died from that scourge of armies, enteric fever, at Harrismith. Sympathy to one in bitter grief is all that most of us can offer, and we feel certain that we only give expression to the thoughts of the rest of the medical profession in offering to Dr. Parsons the assurance that his sorrow is ours as well.

THE CANCER RESEARCH LABORATORIES AT THE MIDDLESEX HOSPITAL.

THE new cancer wing at the Middlesex Hospital forms an institution and is a complete hospital in itself, having a staff of sisters, nurses, servants, and attendants quite distinct from the main building. So long ago as in 1791 the original founder of the cancer wards (Mr. Samuel Whitbread) gave to the hospital a sum of £4000 with the specific direction that the money should be applied to "the relief of persons affected with cancer and the investigation of a complaint which, though extremely common, is both with regard to its natural history and cure but imperfectly known." Later another bequest was received under the will of Dame Alithea Maria Stafford for the purpose of "curing persons affected with cancer and of investigating and promoting our knowledge of treating that dreadful disease." After so long a lapse of time, although the methods of operating have been immensely improved, yet we are obliged to confess that the etiology is still "but imperfectly known." In the new buildings, however, fully equipped laboratories have been established, and under the direction of Mr. A. G. R. Foulerton careful and elaborate research work is being carried on by himself and competent assistants. We have already drawn attention to the advantages offered by such an institution. A letter in the *Times* of Dec. 1st points out the serious financial responsibility which the governors of the Middlesex Hospital have taken upon themselves in founding these laboratories. The results will affect the whole of mankind, and it is to be earnestly hoped that sufficient funds will be forthcoming to render the work as complete as possible.

A PROTEOLYTIC FERMENT IN MILK.

IT has often been conjectured that a peculiar ferment existed in milk of the nature of the pancreatic ferment, but apparently the investigation of the subject has not led to any very definite results. The point is of considerable interest in relation to the alteration effected in the dietetic properties of milk when milk is heated or sterilised. In the sterilised milk diet of infants, for example, scurvy rickets sometimes results which, however, would appear to be avoidable by the addition of raw meat juice or the juice of a fresh lemon. It is maintained by some that there is an element of vitality in milk which is essential to its satisfactory assimilation and that this life element is destroyed, of course, by heat or by sterilisation. Others regard the alteration to be due to certain chemical changes brought about in the proteids by heat. The recent discovery of a definite ferment in milk may, however, throw a new light upon this question. The ferment known as galactase is similar to trypsin and is present in the milk of all animals. It is more active in moderately alkaline than in neutral or faintly acid solutions. It is remarkable that trypsin and pancreatin differ from galactase in not forming ammonia and differ also from other ferments in that the nitrogen compounds formed in digestion by its agency are more equally divided in albumoses, peptones, amides, and ammonia. Further, formalin is found to weaken distinctly the action of galactase, an observation which very pertinently bears upon the legitimacy of employing at least one preservative in milk, at least for infant and invalid uses.

ANEURYSM OF THE AORTA TREATED BY THE INSERTION OF A PERMANENT WIRE AND GALVANISM.

IN the November number of the *Bulletin of the Johns Hopkins Hospital* Dr. Guy L. Hunner publishes accounts of five cases of aneurysm of the aorta which have been treated in the Johns Hopkins Hospital by the insertion of a permanent wire and galvanism (Moore-Corradi method). The first patient, a man, 27 years of age, was operated on by Dr. Halsted on Nov. 24th, 1897. A median incision made from the ensiform cartilage to the umbilicus exposed a pulsating mass in the epigastrium which lay behind the lesser peritoneal cavity and could only be reached by pulling down the stomach and approaching the sac above the lesser curvature. A long aspirator needle was passed into the sac and an unsuccessful attempt made to insert pure silver wire. On a second attempt no more than 17 inches of wire could be introduced. A larger aspirator needle was now used and 38 inches of wire were inserted through it with ease. A galvanic current of from 30 to 100 milliampères was then passed for an hour and 25 minutes, the anode being connected with the end of the wire and the cathode with a large metal plate wrapped in a towel and placed under the back. The wire was cut off close to the sac and the posterior peritoneum closed over the site of the puncture. The patient died in 40 hours from rupture of the sac into the left pleura. Experiments on different kinds of wire were then made and it was found that a silver alloy, highly drawn, containing 75 parts of copper to 1000, seemed to be the best. The sac should never receive both poles of the galvanic battery nor should the current be so passed that the negative electrode is in the sac. The second case, a man, aged 25 years, was operated on by Dr. Finney on August 27th, 1898. On opening the abdomen the sac was found to be almost completely hidden by the flattened-out pancreas. Five feet of the silver-copper wire were passed

into the sac through a fine insulated aspirator needle. The galvanic current was begun at 30 milliampères and gradually increased to 70 milliampères, at which it was kept for one hour. After half an hour the thrill, which was very marked at the beginning, had disappeared. The patient died on the twentieth day. The third case, a sea captain, aged 51 years, was operated on by Dr. Finney on August 11th, 1899. Ten feet of silver-copper wire were passed into the sac. The galvanic current was applied for one hour at 10 milliampères and for 15 minutes at 20 milliampères. The patient was discharged on Sept. 22nd. He recovered sufficiently to again take up work in the re-fitting of a dismasted ship, and whenever seen he always claimed to be perfectly well. He then went on a voyage as captain and died at sea on Feb. 14th, 1900. The fourth case, a man, aged 39 years, was operated on by Dr. Finney on Oct. 27th, 1899. Ten feet of the silver-copper wire were introduced and a galvanic current of 10 milliampères was passed for an hour. At the close of the operation the expansile character of the pulsation had disappeared, while the heaving was still present. On Nov. 20th Dr. Finney again wired the sac, this time passing 11 feet of wire and galvanising as before. The sac was wired a third time on Dec. 8th, 11 feet being passed. On Jan. 14th, 1900, about 11 weeks after the first wiring, the patient died with symptoms of pressure on the trachea. The fifth case, a man, aged 30 years, was operated on by Dr. Finney on Jan. 26th, 1900. Eight or nine feet of highly drawn sterling silver wire were introduced and a galvanic current of 10 milliampères was passed for one hour. The patient was discharged from the hospital on March 8th and is still alive with great improvement in his subjective symptoms. Dr. Hunner has collected histories of 18 other cases of aortic aneurysm treated by the Moore-Corradi method. One of these, a man, 25 years of age, was operated on by Dr. Rosenstirn in 1891. 26 inches of silver wire were introduced and a galvanic current of 70 milliampères was passed for 30 minutes. The patient now weighs about 280 lb., is in good health, and is living an active life as an officer of an American volunteer regiment on the Pacific coast.

MONOPOLY OF ALCOHOL IN ROUMANIA.

WHILE in England several thousands of persons have suffered more or less severely from poisoning because there is no law to prevent the introduction of substitutes in the manufacture of beer the Roumanian authorities have employed the military and have shot down riotous peasants so as to prevent the distilling of unwholesome drinks. In Roumania there are two sorts of alcohol. First, there is the alcohol of commerce made from grain and stated to be duly rectified. In any case its production is controlled by the excise officers, and taxes are levied on its sale. The other alcohol is made from fruit anywhere and anyhow by the peasants themselves. This home-made alcohol pays no tax, unless we count the tax of ten francs per hectare on apple orchards as indirectly bearing on its production. The apples are treated like cider apples—fermented in vats and then distilled so that a sort of insipid alcohol is obtained which is not unlike a very inferior *kirsch* and is called *tzonica*. The methods of distillation are of the rudest and most primitive character. In the corner of some dirty stable or outhouse a sort of stove is built up with clay, and on the top of this is poised a copper cauldron with probably a fair amount of "verdigris" inside. A twisted lead pipe converts this receptacle into an alembic, and a fire is lighted underneath it with the dried droppings of cattle. The alcohol thus produced is rarely sufficiently rectified and sanitary reformers in Roumania have long protested against the injury done by these amateur distillers. Fortunately for the interests of public health, they coincide with those of the public revenue. If there is one article which more than another is predestined to bear the brunt of taxation that article is alcohol, but in Roumania when there is a good apple harvest so much *tzonica* is distilled that there is a comparatively small sale of the alcohol which is taxed. M. Carp, the present Prime Minister, therefore determined to act in a manner that would at once protect the peasants against a poisonous beverage and at the same time increase the revenues of the State. A law was enacted imposing a tax of 50 centimes (or 5*d*.) per hectolitre of *tzonica* (22 gallons) and in accordance with the degree of alcoholic strength, and at the same time abolishing all private distilleries. Henceforth the peasants must take their fermented apples to the distilleries belonging to the State, where they will be converted into a sound brandy properly rectified and of agreeable flavour. The peasants are not obliged to pay in cash for distilling; they can, if they prefer, pay in kind. In any case they will now be supplied with a wholesome article instead of the crude alcohol which they were in the habit of making and drinking. As there are some 166,000 peasants who made own apple *tzonica* this is a far-reaching reform. But the evil was not limited to the families of peasants who owned apple-trees. They used to sell the greater part of the *tzonica* to the village publicans who paid much less for it than for the properly distilled alcohol of commerce. The village publicans mixed the *tzonica* with other alcohols and made large profits by the transaction. The publicans, therefore, rather than the peasants will suffer by the new law and the publicans have organised a riotous resistance. At Parseov the troops were obliged to fire and a few rioters were killed and others were wounded. As a consequence of this rebellious attitude on the part of the publicans it is now proposed to convert all public-houses into a State monopoly—a measure which would add about £1,000,000 per annum to the revenue and would suffice to cover the cost of public worship and public education. As the total income of Roumania does not amount to £9,000,000 sterling per annum and the population is only 5,500,000 persons an additional £1,000,000 to the revenue is an important consideration. But as the peasants are the backbone of the country the Government is proceeding with great caution. Every effort is made to show that the action taken is really to the advantage of the small agriculturist or peasant, that when he does drink he had better drink what is wholesome, and that to tax alcohol is not to tax a necessary of life, but that in any case and whatever the object taxed, it amounts to the same expenditure in the long run. A method of taxation, therefore, which, besides raising the revenues required by the State, would tend to prevent alcoholic poisoning is better than a form of tax which offers no such counter-balancing advantage. Then, as Roumania is contiguous to Russia and as in that vast empire alcohol has already become a State monopoly, it is not surprising that Roumanian statesmen should meditate the following of this example. From the public health point of view all such action is of the greatest interest. Anything that tends to check drunkenness must improve the physique and the morals of the populations concerned.

THE DRUNKENNESS OF SCOTLAND.

IN connexion with the subject of treating and casual drinking we lately noticed with much satisfaction the creation in Scotland of a society for the repression of these practices. We have a big beam in our own eye on this side of the border and are in no way entitled to assume superiority over our fellow-subjects on the other side. But we see with regret from the judicial statistics of Scotland, quoted in the *Evening Standard* of Dec. 10th, that there remains a "huge volume of drunkenness and disorder in

Scotland" which should have the attention of all intelligent and religious people. In the year 1899 176,000 persons were apprehended or cited for these offences; and the numbers constitute a record. The following are the five towns which have the worst record: South Queensferry has 1424 cases of drunkenness and disorder per 10,000 population; Falkirk, 1066 cases; Linlithgow, 830; Cumnock, 770; and Clydebank, 756. We venture to suggest that the medical profession of Scotland, apart from all extreme theories and practices, should take this subject into its consideration with a view to some public statement of the medical and pathological bearing of such statistics.

A NEW MUZZLING ORDER.

AN order of the Board of Agriculture in the *London Gazette* of Dec. 8th provides that every dog brought to Great Britain from any other country except the Channel Islands and the Isle of Man shall, unless accompanied by a properly issued licence authorising its landing, be chained and muzzled in some inclosed portion of the ship, while the latter is lying at any port in Great Britain. In case of default the owner of the dog, the person for the time being in charge thereof, and the master of the vessel may be proceeded against under the Diseases of Animals Act, 1894.

INDIAN AND COLONIAL ADDENDUM TO THE BRITISH PHARMACOPŒIA, 1898.

BY the courtesy of the General Medical Council we have received for review an early copy of the above. The copy is avowedly imperfect and subject to slight verbal and typographical alterations, and it cannot yet be obtained from the publishers, since the price has not been determined by the Treasury. We understand that it is impossible to give any idea of the precise date of publication, but that meanwhile copies similar to that supplied to us may be consulted at the offices of the General Medical Council, in London, Edinburgh, and Dublin.

THE REGENT'S CANAL AND THE PUBLIC WEAL.

THE Regent's Canal was intended to be, and originally was, an attractive water-way. The general design of the canal and the details of the work alike show that it was arranged with a view to be beautiful as well as useful. Its primary object was, of course, to transport heavy goods. The work was projected in the early part of the present century at a time when food was scarce, and it was said that such a canal would diminish the cost of carting and lessen the number of draught-horses, "whereby," urged the promoters, "much land now applied in the growth of provender for them may be more beneficially used in the culture of food for mankind." The project took statutory form in the year 1812 (52 Geo. III., c. 195), and the work, begun on Oct. 14th of that year, was completed and opened for traffic in 1820. The company obtained from the Consolidated Fund the use of a sum of £200,000, and later another sum of £100,000 was advanced on the security of the undertaking (1 & 2 Geo. IV., c. 43). From these facts it will be seen that the Regent's Canal was projected nominally in the public interest and that to assist in carrying out the work the use of the public credit was granted. It follows from this that the business ought to be carried on in a way to serve, and not to interfere with, the public weal. It cannot be said that these conditions have been, or are, fulfilled. For many years past the accessories which made the canal banks attractive and beautiful have been neglected, the towing-path has fallen into a state of bad repair, and, worse than all, the water in the canal, instead of being clear and bright, has been allowed to become filthy and putrid. Every summer lately during the warm weather the stench from the canal has been most offensive. A report recently presented to the Public Health Committee of the London County Council has called attention to the foulness of the water, and some rather curious suggestions were made as to what ought to be done in the matter. One councillor gave it as his opinion that the canal should be done away with—a proposition which would, of course, require an Act of Parliament to give it statutory force. Another councillor thought that the Thames Conservancy should have power to prevent the canal water from passing into the Thames. This proposal also could only be carried out under a special Act passed for the purpose, and if then it could be enforced it would necessarily render the state of the canal more foul than it is at present. The report of the Health Committee of the London County Council is, however, more worthy of consideration. The Regent's Canal Company, it is said, are authorised to sell water from the higher levels outside the county and they exercise this right, the proceeds of the sale forming part of their revenue. For the purposes of navigation the water, instead of being allowed to flow down from the higher levels, is pumped back from the lower levels. The committee point out that the good effects of flushing the canal with water from the upper levels has been practically proved. Some years ago several of the vestries complained of the foulness of the canal and the company allowed nearly 16,000,000 gallons of water to pass down, whereupon the nuisance was quickly abated. In December, 1893, the Health Committee conferred with representatives of the sanitary authorities through whose districts the canal passed, and in February, 1894, the London County Council took counsel's opinion as to whether the Attorney-General could, if called upon by the Council, proceed by public indictment against the canal company for creating a public nuisance by neglect in the management of their business. The Council were advised that the case was not one in which the Attorney-General would be likely to take proceedings until every effort had been made to stop the nuisance under the Public Health London Act (1891). It does not appear from the report that the Council have made every, or indeed any, effort to avail themselves of the Act of 1891, nor is any explanation given as to why they have neglected to use so ready and effective a weapon, which appears to be the more curious inasmuch as the counsel who advised them pointed out that in his opinion the Council were not empowered to pay the expenses of an action by indictment. The Public Health London Act (1891) was passed for the very purpose of giving the local authorities power in all matters relating to nuisances. It is an excellent Act and if use were made of its provisions London would be a very much cleaner, a much more beautiful, and a much more healthy place than it is at present. We have every confidence that the new metropolitan boroughs will effectively carry out the great duties committed to their care and will abolish nuisances which have eluded both the apathy of the vestries and, if it may be so called, the vigilance of the London County Council.

PLUMBING AND THE NEW CORPORATIONS.

THE annual Livery dinner of the Worshipful Company of Plumbers, held on Nov. 27th at the Fishmongers' Hall was a gathering of more than usual interest. It afforded the Lord Mayor of London, and many of the mayors of the oldest municipalities in the country, the opportunity of meeting their more recently created brethren of the municipal world, including the 28 mayors so recently enrolled in Greater London. In fact, as one of the speakers (Mr. Robert Crawford of Glasgow) said: "The Plumbers' Company had succeeded in creating, in a way impossible for any other body, a federation of all the

municipal and county authorities of the United Kingdom and of those interested in the sanitary question from almost every standpoint." The speakers generally insisted on the importance and necessity of legislation in some form in order to give to the public a measure of protection from the evil effects of ignorance or malpractice on the part of those undertaking plumbing work. A meeting was held at the Guildhall, London, during the week between representatives of district councils and the Worshipful Company of Plumbers, in furtherance of some form of legislation,

CHRISTMAS SHOPPING AND PUBLIC HEALTH.

WITH the approach of Christmas an increased stress of work presses heavily on shopkeepers and their assistants. In these days of intensified competition it is not surprising that shops are kept open late at night, but such overwork is not healthy and anything that can help to give all classes sufficient leisure to recoup from the exhaustion of their daily avocations is of public benefit. In America some ladies have taken a generous initiative in this respect and have formed what they term the Consumers' League. The members of this organisation point out the inconsistency of subscribing to hospitals while at the same time the subscriber will go late to a store and "badger a saleswoman into a fit of nervous prostration." Consequently the members of this league are expected to refrain from making any purchases after 5 o'clock in the afternoon and not to allow parcels to be sent to their homes later than 6 o'clock. Nothing can be more simple than this suggestion. If it could be carried out there would be an end to the shop-assistant's grievances, and this without any sort of legislation or police interference or the expense of maintaining an army of inspectors to see that the law is enforced. Unfortunately a league of this sort is only likely to be supported by a thoughtful and unselfish minority of altruistic humanitarians. There is also a material obstacle in the fact that many persons are at work till after 5 o'clock and therefore have not time to do any shopping before that hour. Nevertheless, only good can result from calling attention to this question, and this is, more than any other time of the year, the season for doing so. If only those who have the leisure to do their shopping before 5 o'clock made it a firm rule never to purchase anything after that hour this alone would suffice very materially to relieve the strain on tradesmen and their assistants. Then a great deal might be done by taking time by the forelock instead of leaving purchases, especially Christmas purchases, to the very last moment. In a word, and in defence of the health and happiness of a large section of the community, we appeal to all intending purchasers to think not only of themselves and their purchases but also of the interests of those tradesmen with whom they intend to deal. It will not cost more to buy earlier in the day and somewhat sooner in the season, but it will distribute more evenly the work that has to be done in satisfying the demands of the consumer and thus will mitigate the unhappy and unhealthy strain that weighs so heavily on shop assistants at Christmas time.

WOMEN HEALTH OFFICERS.

THE Vestry of St. George-the-Martyr, Southwark, shortly before its existence terminated published the fact that out of a total of 1331 deaths which occurred during a certain period, 765, or nearly 60 per cent., had been among children under five years of age. To those intimately associated with the study of disease amongst the inhabitants of the poorer parts of London this will occasion no surprise. The out-patient rooms in the children's department at our general hospitals and in the special hospitals devoted to the treatment of the diseases of children are crowded with the results of maternal ignorance and neglect. The want of knowledge displayed by the mothers as regards the diet of infants and young children is astounding and can only be fully appreciated by those who are brought frequently and intimately into contact with the results of defective feeding. The general want of hygiene in the dwellings of the uneducated classes is also astonishing and greatly adds to the general death-rate. In several of the large provincial towns, including Birmingham and Sheffield, officers have been appointed to attempt to instruct the women as to the way in which their children should be fed and their rooms kept clean. The Limehouse Vestry applied for permission to appoint a similar officer last year, but were refused. The Vestry of St. George-the-Martyr, Southwark, which published the figures already referred to, appointed a lady under the somewhat cumbrous but significant title of "Lady Sanitary Officer and Health Inspector." She will be expected to visit the homes of the poor and to instruct them how to get rid of bad smells and vermin, to point out to the mothers the prejudicial effect of insanitary conditions of health, especially as regards children, and where sickness exists to advise as to the nursing of the patient, the preparation of the food, and the administration of remedies, also to advise as to the management of the house where a patient suffering from pulmonary tuberculosis is resident, both in the interests of the patient and of the others living in the house. She is also to instruct the women in various domestic details, such as the cleaning of the rooms, passages, and yards, and in the cooking and preparation of the family meals. In theory the idea of such an officer is excellent, and the late Vestry of St. George-the-Martyr, Southwark, deserves the warmest praise for appointing one. No doubt a large amount of good will result. The lady in question will require an immense amount of tact and perseverance, and we wish her every success, but whether she will succeed in the Herculean task of cleansing the Augean stables of slum ignorance and prejudice remains to be seen. The effort, however, is certainly worthy of a trial, and it is to be hoped that the newly-formed municipal bodies will imitate the example of Southwark and appoint similar officers throughout London.

NEALE TESTIMONIAL FUND.

WE are requested to state that the Committee have decided that the testimonial to the late Dr. R. Neale shall consist of (1) a life-size portrait in oils by Mr. T. B. Kennington, the painter of the excellent memorial portrait of the late Professor Hopkinson; and (2) four silver bowls, suitably inscribed, to be presented to the four members of Dr. Neale's family. As soon as possible a list of subscribers and a balance sheet will be published.

AT a meeting of the council of the Hospital Sunday Fund, held under the presidency of the Lord Mayor, at the Mansion House, on Dec. 7th, on the motion of Dr. J. G. Glover, seconded by Sir Henry Burdett, the following motion was unanimously adopted: "That in regard to the grant to the National Hospital for the Paralysed and Epileptic, Queen-square, W.C., the basis of which has been already arranged by the distribution committee for the current year, the distribution committee be empowered to pay, out of funds in hand, the award, on being satisfied of the settlement of the existing differences before May 1st next."

LORD ROBERTS will honour the Irish Medical Schools' and Graduates' Association by his presence at a banquet to be given by the members to their distinguished fellow-countryman on his return from South Africa. Lady Roberts

and her daughters have also accepted an invitation to be present on this occasion.

THE death is announced of Mr. R. G. Glenn, the Recorder of Croydon. He was born in 1844 and was a "Grecian" of Christ's Hospital. His name should be widely known to medical men, for he was the author of "A Manual of the Laws affecting Medical Men" and of the Legal Abstract published in Churchill's "Medical Directory."

DR. D. E. ANDERSON of Paris, a graduate of the London and Paris Universities and former physician's and obstetric assistant at University College Hospital, has been elected to the post of visiting physician to the Hertford British Hospital, Paris.

AT a general monthly meeting of the Members of the Royal Institution held on Dec. 3rd Dr. Allan Macfadyen was announced to have been appointed Fullerian Professor of Physiology for three years, the appointment dating from Jan. 14th, 1901.

IT is announced that the Queen has granted to the Royal Society, for the purposes of a national physical science laboratory, Bushey House, Bushey Park, formerly the residence of the Duc de Nemours.

DURING the week ending Dec. 6th 46 fresh cases of plague were registered at Mauritius, 26 of which were fatal. The total deaths from plague during the week numbered 33.

THE *London Gazette* of Dec. 11th contains new rules made by the Home Secretary for retreats licensed under the Inebriates Act.

Mr. W. H. BATTLE, F.R.C.S. Eng., has been elected surgeon to St. Thomas's Hospital in the room of the late Mr. W. Anderson.

REPORT TO THE

HOSPITALS SUB-COMMITTEE OF THE MANCHESTER SANITARY COMMITTEE ON THE OUTBREAK OF ARSENICAL POISONING NOW IN PROGRESS IN MANCHESTER.

DR. JAMES NIVEN, Medical Officer of Health of Manchester, has presented the following report to the Hospitals Sub-committee of the city on the outbreak of arsenical poisoning in Manchester:—

The medical officer of health begs to present to this sub-committee a report on the outbreak of arsenical poisoning now running its course. On Nov. 20th Dr. Reynolds called at the Health Office and informed the medical officer of health that he had obtained well-marked reactions of arsenic in a sample of beer which he had examined. For some months there had been a large number of patients coming into the Union Infirmary with well-marked and fairly uniform symptoms, and there were at present a very large number of these cases in the wards. They were all beer-drinkers and drank the cheaper kinds of beer and stout. For some time he had suspected the presence of some deleterious agent in the beer and latterly the symptoms had suggested arsenic. He had therefore procured a sample of a beer which was pointed to by many of the cases, tested it, and found arsenic. He also informed your medical officer of health that another sample of beer submitted to Professor Dixon Mann had been found to contain arsenic, thus confirming his observation. Previous to Dr. Reynolds's intimation on Nov. 20th your medical officer of health was aware of nothing indicating either an outbreak of a fresh form of disease or the existence of impurities in the beer. The medical officer of health made an appointment with Dr. Reynolds to see the cases next day at Crumpsall. On visiting the Crumpsall Workhouse on Nov. 21st he saw, in company with Dr. Reynolds and Dr. H. G. Brooke, a large number of cases presenting special and fairly uniform symptoms. Dr. Brooke stated that he had seen for some time a number of cases with eruptions of a peculiar nature and such as to give rise ultimately to a suspicion of arsenical poisoning. The medical officer of health at once saw Mr. Rook, the superintendent of the Sanitary Department, and they arranged that 12 samples of beer (sixpenny and fourpenny from each) should be obtained from six tied houses. These samples were accordingly obtained and submitted to the public analyst. Meanwhile, Dr. Tattersall, the medical officer of health for Salford, had submitted samples of beer to Professor Delépine, who, in the absence of Professor Dixon Mann, undertook an investigation into the nature of these samples which had apparently given rise to symptoms of poisoning in Salford. Your medical officer of health could not move further in the matter until on Nov. 23rd Dr. Kelynack called to inform him that he and Dr. Kirkby had that day discovered the arsenic present in the beer to arise from glucose. On the same day Professor Delépine informed your medical officer of health that on Nov. 22nd he had discovered the presence of a considerable amount of arsenic in particular saccharine matters used in brewing, and that he at once communicated with Dr. Tattersall.

Dr. Tattersall on Nov. 23rd went down to Liverpool (as your medical officer of health was informed by a reporter) to procure a sample of the sulphuric acid used in making the incriminated glucoses and inverts. It did not appear to your medical officer of health necessary to obtain samples of the materials at that time from the glucose manufacturers, as these had already been procured by Dr. Tattersall at the earliest possible time, and the results of the investigation which he knew was being conducted by Dr. Tattersall with equal energy and skill would be available at an early date for our own procedures. It did, however, seem necessary to act with all possible speed administratively. On Nov. 23rd, therefore, samples of the saccharine materials employed were obtained from two breweries implicated by the patients. On Nov. 24th your medical officer of health improvised a laboratory in his room, aided by the assistant medical officers of health, Dr. Coates and Dr. McCleary, and by Mr. R. M. Rowe of the Sanitary Department, a gentleman of considerable chemical experience, whose services have been most valuable. Two samples of beer and one of stout were procured and examined on Nov. 24th. A trace of arsenic was believed to be found in a sample of beer, and the same material was believed to have been found in one of the saccharine matters. Your medical officer of health then consulted Professor Delépine who, with his usual courtesy and kindness, showed him the methods which he had employed and the quantities of the materials used in the analyses. On Nov. 26th the examinations were renewed at the office, and, being fortunate in the methods which we adopted for the Marsh test, on the 27th we were in a position to proceed. Samples of the saccharine matters stated to have been used by the brewers were rapidly obtained by the medical officers and we commenced an examination of all the saccharine matters furnished to us as being those in use by 23 Manchester breweries visited, as well as of three glucoses used in the manufacture of cheap sweets and jams. As regards the latter it may at once be said that not a trace of arsenic was found in them. As regards the saccharine matters which were furnished to us by the brewers as being used by them, and which included Home and American glucoses and inverts, we examined them all to the number of 46 specimens from 20 breweries. In not one did we find a trace of arsenic except in the glucoses and inverts emanating from one firm, in which it was present apparently in considerable amount. Unfortunately, five out of the 20 breweries were using this material to our knowledge, or had just discontinued it, while in another instance its use had been discontinued for two months. It is possible that there are other breweries in which it has been used where we have not been informed of the fact. As soon as we knew that the examination of a saccharine material revealed the presence of arsenic, information was sent to the manager of the brewery concerned with a request that all beer now on the market in which the incriminated sugar had been used should be immediately recalled.

Meantime on Nov. 27th a circular letter was sent to all the practitioners in the city asking for certain information, based on the symptoms of the cases at Crumpsall. The

replies to these are most valuable and instructive. Basing our action on these reports and on the information which they afforded, and in pursuance of an instruction from the meeting of the Sanitary Committee of Nov. 27th, we have obtained samples from a number of public-houses. Instructions were given by the Sanitary Committee on Nov. 28th that this course should be pursued, and it is considered that ample opportunity has been given to get rid of any poisonous beer or stout. Some samples since taken from public-houses and examined unofficially have been found to contain an appreciable amount of arsenic. The number of samples of beer and stout examined unofficially since the instruction of the committee has been 45, of which 11 have been found to contain arsenic. Subsequent samples from the same houses have been sent to the public analyst.

City of Manchester. Deaths from:

Week ending.	Peripheral Neuritis.	Neuritis (other).	Alcoholism.	Cirhosis of the liver.	Liver diseases (other).	Gastritis (in adults).	Total.
1899							
Jan. 7th	—	—	5	3	—	—	8
,, 14th	1	1	1	—	—	—	3
,, 21st	—	—	2	—	—	—	2
,, 28th	2	—	1	1	1	—	5
Feb. 4th	—	—	—	4	—	—	4
,, 11th	—	—	2	—	—	—	2
,, 18th	—	—	1	2	—	1	4
,, 25th	1	1	2	—	—	—	4
March 4th	—	—	1	1	2	—	4
,, 11th	—	—	1	—	2	—	3
,, 18th	1	—	1	1	1	—	4
,, 25th	—	—	3	3	—	—	6
April 1st	—	—	3	—	—	—	3
,, 8th	—	—	—	1	—	—	1
,, 15th	—	—	2	3	1	—	6
,, 22nd	—	—	—	2	—	1	3
,, 29th	2	—	2	—	1	—	5
May 6th	1	—	1	3	1	—	6
,, 13th	—	—	3	1	—	1	5
,, 20th	—	—	1	—	1	—	2
,, 27th	—	—	3	3	—	—	6
June 3rd	—	—	1	2	—	—	3
10th	1	—	2	—	—	—	3
17th	—	—	—	4	1	—	5
,, 24th	—	—	1	1	—	—	2
July 1st	—	—	2	5	—	1	8
,, 8th	1	—	2	1	—	—	4
,, 15th	—	1	3	4	1	—	9
,, 22nd	1	—	5	4	—	—	10
,, 29th	—	—	2	3	—	—	5
August 5th	—	—	—	5	—	1	6
,, 12th	1	—	2	4	—	—	7
,, 19th	—	—	—	4	1	—	5
,, 26th	—	—	—	1	1	—	2
Sept. 2nd	1	—	3	5	—	1	10
,, 9th	1	—	1	—	—	—	2
,, 16th	—	—	—	—	—	—	—
,, 23rd	—	—	1	1	1	—	3
,, 30th	1	—	4	1	—	—	6
Oct. 7th	2	1	2	1	—	—	6
,, 14th	—	—	3	—	—	1	4
,, 21st	—	—	2	1	—	—	3
,, 28th	—	1	3	4	1	—	9
Nov. 4th	—	—	2	1	—	—	3
,, 11th	1	—	1	2	—	1	5
,, 18th	—	—	—	2	—	—	2
,, 25th	—	—	—	2	—	1	3
Dec. 2nd	—	—	—	2	1	—	3
Total	18	5	77	83	17	9	214

Week ending	Peripheral neuritis.	Neuritis (other).	Alcoholism.	Cirrhosis of the liver.	Liver diseases (other).	Gastritis (in adults).	Total.
1900							
Jan. 6th	1	—	2	—	—	1	4
,, 13th	—	—	—	1	1	—	2
,, 20th	—	—	1	1	1	—	3
,, 27th	—	—	2	—	—	—	2
Feb. 3rd	—	—	1	1	—	—	2
,, 10th	—	1	3	2	—	—	6
,, 17th	—	—	2	3	1	—	6
,, 24th	1	—	—	2	1	—	4
March 3rd	1	—	2	1	—	1	5
,, 10th	—	1	—	5	—	—	6
,, 17th	1	—	—	3	1	—	5
,, 24th	—	—	1	4	—	—	5
,, 31st	1	—	1	2	—	1	5
April 7th	—	—	1	—	—	1	2
,, 14th	—	—	1	2	—	—	3
,, 21st	—	—	1	1	—	—	2
,, 28th	—	—	2	3	—	—	5
May 5th	—	—	—	2	1	2	5
,, 12th	—	1	3	1	—	—	5
,, 19th	1	—	2	1	—	1	5
,, 26th	—	1	2	4	2	1	10
June 2nd	1	—	2	4	—	1	8
,, 9th	2	—	2	2	2	—	8
,, 16th	—	—	6	2	1	1	10
,, 23rd	1	—	4	2	—	1	8
,, 30th	1	1	2	2	—	—	6
July 7th	1	—	3	4	—	—	8
,, 14th	—	—	3	5	1	—	9
,, 21st	1	—	2	1	1	—	5
,, 28th	—	—	3	—	—	—	3
August 4th	1	1	4	4	2	—	12
,, 11th	1	—	1	3	—	—	5
,, 18th	1	—	2	1	1	—	5
,, 25th	—	—	1	2	—	—	3
Sept. 1st	—	—	1	1	—	2	4
,, 8th	1	1	4	1	—	1	8
,, 15th	1	—	—	3	—	—	4
,, 22nd	—	—	4	3	2	2	11
,, 29th	—	—	5	2	—	1	8
Oct. 6th	2	1	1	2	—	1	7
,, 13th	3	2	4	3	—	—	12
,, 20th	2	—	—	2	—	—	4
,, 27th	3	—	3	1	—	—	7
Nov. 3rd	1	—	5	3	—	—	9
,, 10th	1	1	3	4	1	—	10
,, 17th	3	—	2	2	—	1	8
,, 24th	—	—	1	3	—	—	4
Dec. 1st	6	—	3	4	1	—	14
Total	39	11	98	105	20	19	292

After the exhaustive investigation carried out by Dr. Tattersall and Professor Delépine there remains very little to be said on the subject except on matters of detail. There are, nevertheless, some points on which the committee would probably wish to be informed, especially what has been the nature and magnitude of the evil.

Nature of the disease.—There is a class of disease known to medical men as alcoholic neuritis. As a few good observers state that they see no difference between these fresh cases and those which they have previously known as alcoholic neuritis this will sufficiently indicate the nature of the outbreak to medical men. In the slighter cases there may or may not be nausea and sickness and irritation of the eyes, followed by a feeling of pins and needles in the tips of the fingers and toes; the calves are painful on pressure, and the hands presently become numb and useless. Wasting of

certain small muscles of the hand is almost invariable. Many cases get dropped wrist or walk unsteadily. In the most severe cases the paralyses advance quickly, the patient cannot stand, has perhaps delirium, and sinks into a comatose state from which he does not recover. A prominent feature of many of the cases is pigmentation of the skin, which in some cases has been very deep, the patient being almost like a mulatto.

It is impossible in a report of this kind to do more than indicate the kind of illness to which our figures relate, although the courtesy of the medical officers at Crumpsall and Withington in allowing the medical officers to see the cases must be acknowledged. The medical officer of health has received information of about 1000 cases of the above class of illness from 90 medical men. These do not include the cases which have been sent into the union hospitals during the last few months which will probably come to 700 or so more. Allowing over 300 cases to medical men who have not answered the circular there have thus been at least 2000 cases who have been seen by a medical man. There will, no doubt, be a good many more with minor degrees of illness which have not been seen by a medical man.

An important question is whether there is any appearance of improvement in the outbreak. Many medical men state that the cases still continue to come in, as they will do for a little time even if the incriminated beer is entirely stopped, since it takes some time to produce the wasting observed in these cases. The general impression conveyed by the statements of medical practitioners is that the worst has passed and that the worst period of all was towards the end of October. What do our statistics say? The statistics should throw some light on the question whether this is or is not an entirely new phenomenon, and I have, therefore, had the deaths excerpted week by week under these headings: peripheral neuritis; neuritis; alcoholism; cirrhosis of the liver; other disease of the liver; gastritis in adults. These deaths are then added up to make a total for the week. The result is shown on the table given on the previous page and the figures are sufficiently remarkable.

The number of total weekly deaths from the enumerated causes suddenly shoots up in the last week of May and thenceforward, generally speaking, remains high up to the present time. We may suspect that some alteration took place in the quality of the beer used about the beginning of May. This we have not yet time to inquire into. The same period—viz., the end of May—also marks a slight increase in the number of deaths ascribed to peripheral neuritis, which now furnishes about one death a week. Yet even in the last two weeks of September no death is ascribed to this cause. In October, however, there is a very slight increase, sufficient at all events to show that some observers were now becoming alive to the character of the cases. We may at the same time confidently assume that, in the absence of this suspicion, most of the few cases added to peripheral neuritis in October would have appeared in the column alcoholism. This your medical officer of health has ascertained both as the result of conversations and from the reports sent in.

How do the figures of 1900 compare with the figures for a corresponding period of 1899? The deaths from peripheral neuritis have nearly doubled in 1900. The difference is, however, confined to recent months, since up to the end of May there were in 1900 only five deaths from this cause, as compared with eight in 1899 from Jan. 1st to May 31st. Many medical men have regarded this outburst as an outbreak of alcoholism due to the war fever. It is therefore of considerable interest to see whether in 1899 there occurs any change in the number of deaths from the causes enumerated similar to that which appears in the present year. It will be seen from the table that the figures for July and August of 1899 seem to indicate a similar increase of this class of case on a smaller scale, the increase being observable under both alcoholism and cirrhosis of the liver. These figures suggest to your medical officer of health that the recent occurrence does not stand quite alone and that previous mischief in connexion with alcohol has occurred in an epidemic fashion. The suggestion is that there may have been arsenic present in the beer formerly. There is, indeed, reason to suspect that the same phenomenon may have been going on for years, though in a slighter degree. This would justify some delay in recognising the nature of the disease, since the cases would be regarded as ordinary alcoholic cases of a recognised type with an unusual proportion of certain striking though not unknown features.

Tables have also been prepared for 1897 and 1898 and the results may be thus summarised:—

Causes of death.	Number of deaths in the first 48 weeks of			
	1897.	1898.	1899.	1900.
Peripheral neuritis	11	17	18	39
Neuritis (other)	2	5	5	11
Alcoholism	71	43	77	98
Cirrhosis of the liver	88	76	88	105
Other diseases of the liver...	35	32	17	20
Gastritis (adults)	25	32	9	19
Total	232	205	214	292

There has, therefore, not been much change in the aggregate number of deaths in 1897 to 1899, while it has greatly increased in the present year (1900). There has been an increase year by year since 1897 in the number of deaths from peripheral and other neuritis, very much accentuated in 1900. The deaths from alcoholism have increased progressively since 1898, and in 1900 are more than double the number in 1898. They were, however, more numerous in 1897 than in 1898. The number of deaths from cirrhosis of the liver have increased progressively since 1898. In 1897, however, they were more numerous than in 1898. From other diseases of the liver than cirrhosis the number of deaths was greater in 1897 and 1898 than in 1899 and 1890. From gastritis the same relation very singularly holds, with the addition that the deaths in 1900 number more than twice as many as those in 1899. The far larger number of deaths from alcoholism and cirrhosis of the liver in 1897 than in 1898 taken along with their distribution in weeks is striking and calls for future inquiry. On the whole, the complete figures do not remove the impression that this is not an entirely new phenomenon.

In accordance with the instructions of the Sanitary Committee a vigorous search is being made for arsenical beers and stouts sold in public-houses, and suspected samples have been submitted officially to Mr. Estcourt. It is desirable that a quantitative analysis should be made for one of these samples, but it is probable that the qualitative tests carefully carried out will suffice for a prosecution under the Food and Drugs Acts. Still, one quantitative analysis is advisable.

To the assistant medical officers, Dr. Coates and Dr. McCleary, I am indebted for the accounts of individual cases which they have collected and for the pains which they have taken to collect facts. Mr. R. M. Rowe of the sanitary department has conducted the qualitative analysis of samples with his usual care and skill and with ungrudging zeal. My statistical clerk, Mr. Ross, has prepared the statistical tables which have entailed considerable labour.

THE WAR IN SOUTH AFRICA.

NOTWITHSTANDING the assurance of Lord Roberts that the war is over it cannot be said that Boer resistance has ended or that there is any immediate prospect of its being ended. The war has, as we all know and regret, degenerated into a desultory kind of marauding and surprises, varied by vigorous and exhausting pursuits of De Wet. As a rule, the efforts of the British to repel the attacks of the more or less disorganised and scattered bodies of Boers acting independently of one another have been very successful, but it is still far from being the fact that all dangerous opposition has been stamped out. Lord Roberts has resigned his command in South Africa and has handed it over to Lord Kitchener, who is generally thought to be admirably suited to deal with the present phase of the war and to bring it to an end. It will be remembered that while in a military sense the conquest of Burma proved a comparatively easy task, the real subjection of that country and the suppression of the system of dacoity was a very difficult one, and the Boers are a very different and far more tenacious foe than the Burmese. Such is, briefly summarised, the present position of affairs in South Africa. The capture of

that redoubtable warrior and clever tactician De Wet and his force, whenever it is accomplished, will probably have a decisive effect. The description of the recent chase of De Wet is of the most exciting kind and says a great deal for the pluck and endurance of the troops on both sides. No better illustration could be given, by the way, of the very difficult and puzzling problem of safeguarding the health of troops on service by sanitary measures than is afforded by these forced marches. It is not easy to see what plan of hygienic precautions could be devised for the purpose, and it is likely that any recommendations on the part of the medical service would be, and from the emergent nature of the case probably would have to be, practically disregarded. Such occurrences must, we fear, often take place in war where it is all that troops can do to carry their food-supplies and ammunition. Setting aside, however, such exceptional conditions, it seems to us that we may in future wars have to organise a special sanitary corps with a large and properly directed executive service and furnished with all necessary appliances for field sanitary work.

Turning to matters of more immediate medical interest we have to note that Lord Stanley, writing from headquarters in South Africa, has replied to a letter by Mr. Burdett-Coutts dated Sept. 19th last in which the latter challenged the correctness of Lord Stanley's evidence before the Royal Commission. Lord Stanley adheres to his original statements and inferences, and by way of corroborating them accompanies his letter with one from Mr. W. Maxwell, a correspondent of the *Standard*. Mr. Burdett-Coutts, however, replies at some length in the *Times* to Lord Stanley, repudiating the notion that he had ever used or intended any covert threat as alleged. It is a lively little episode, but it has no real bearing on the facts regarding the state of the hospitals —at least none of public interest as it seems to us. According to Mr. Balfour's statement in the House of Commons, in reply to Sir Walter Foster, the Royal Commissioners hope to present their report on the South African hospitals early in the ensuing year and we may therefore be content to await its publication. The figures showing the amount of sickness attributable to typhoid fever during the campaign are heavy. Mr. Powell-Williams stated in the House of Commons on Dec. 11th that the total number of cases of typhoid fever amongst the forces in South Africa from the beginning of the war till Sept. 28th last was 15,655; and the number of deaths from that disease was 3642; and that the number sent home as invalids was 9128. Mr. Brodrick has promised in the House of Commons to give the fullest consideration to the report of the Hospitals Commission. He pledged himself, moreover, to make such changes, however radical, as would be likely to make an efficient army medical service. The Queen and the Royal Family have always manifested a great interest in all that concerns the sick and wounded soldier, and it was only to be expected that the Princess of Wales would visit Southampton in order to welcome home the invalids and wounded arriving in this country on board the hospital ship named after Her Royal Highness. This being the third voyage in this particular service made by the vessel a statement was handed to the Princess during her visit setting forth the important services which the ship had performed during the year of her employment for hospital purposes.

THE IMPERIAL YEOMANRY BASE HOSPITAL.

BY L. V. CARGILL, F.R.C.S.,
OPHTHALMIC SURGEON TO THE HOSPITAL.

To-day (Nov. 10th) there are 492 patients in the hospital—viz., 16 officers and 476 non-commissioned officers and men. Of these nine officers and 362 non-commissioned officers and men (i.e., nearly four-fifths) belong to the Imperial Yeomanry. We are becoming almost entirely a Yeomanry Hospital in deed as well as in name, for although we have not received hospital trains for the last few weeks Yeomanry are arriving from the front daily in tens and twenties. They come down by the ordinary trains and are mostly convalescent and recovering from fever contracted further north. In response to the diminution in the work there has been a further reduction in the staff. Dr. J. W. Washbourn has transferred his services to the branch hospital at Pretoria, where he was much needed; I myself am just leaving for home; whilst Dr. J. B. Christopherson and Mr. W. C. G. Ashdowne, as well as several nursing sisters, have already left

On the surgical side Mr. H. A. Ballance has operated on several cases of appendicitis lately with satisfactory results. In some of these an abscess had formed and in others the appendix was removed in the quiescent interval, the hardships of the campaign causing the old disease to be again active. A case of typhoid fever with perforation was operated on recently. The patient, a man, aged 30 years, was under the care of Dr. A. Elliot, and perforation occurred in the fourth week of the disease, which was severe and marked by much toxæmia. Distension was not great. At the time of perforation the pulse was 96 and the temperature was 101·2° F. There was no fall of temperature with the perforation, although the pain was sudden and was severe enough to make the patient call out and to double him up in bed. During the next few hours the temperature gradually rose to 102·6° and the pulse to 116. Tenderness and rigidity increased to the lower half of the abdomen. Mr. Ballance operated within six hours of the attack of pain and found that there was perforation immediately under the laparotomy wound in a coil of the ileum 18 inches from the cæcum. It was one-sixteenth of an inch in diameter and there had been very little leakage into the abdominal cavity. The aperture was closed by eight Halsted silk sutures, quite half an inch of the wall of the bowel being infolded on each side of it. As a precautionary measure a few stitches were placed in another Peyer's patch, 12 inches from the cæcum, to infold its very thin base. The intestinal coils and Douglas's pouch were sponged dry. No irrigation or drainage was used. The patient progressed extremely well for the next 48 hours, the pulse coming down to under 90; the temperature was subnormal, there was no pain, and it was thought that he would pull through. At the end of this time, however, he again complained of abdominal pain, distension came on rapidly, the temperature rose to 102·6°, the pulse to 144, and he died in 56 hours from the time of the operation. There was no vomiting either at the time of the initial perforation or subsequently. At the necropsy it was seen that another minute perforation had occurred through the base of the same ulcer as before along the track of one of the sutures and had caused the second attack of peritonitis. The whole of the Peyer's patch, which was a very wide one, had not been infolded at the operation, as too much narrowing of the lumen of the bowel was feared. There was extensive ulceration in the lower three feet of the ileum and also in the cæcum. It is to be regretted that of the three cases of perforation in enteric fever operated on in this hospital not one has recovered. A case of abscess of the liver resulting from a Mauser bullet which traversed the right lobe of the organ has occurred. The patient is rapidly recovering since the operation, but as the recovery is not yet complete details of the case must be left to a subsequent report. Too much praise cannot be accorded to Mr. Hall-Edwards for the admirable way in which the x-ray department has been managed and the absolute certainty of localisation to the smallest fraction of an inch that has attended his work on the radiography of foreign bodies lodged in the tissues.

On the medical side there is not much of importance to record. Enteric fever has been decidedly on the increase during the last month and a number of cases have come down from the front either with signs of the disease or in the incubation stage, but none has been contracted in hospital. The general type of disease is less severe than formerly, which is due, no doubt, to the better condition and therefore greater resisting power of the men. One of our dressers (Mr. A. C. Ransford) is at present suffering from enteric fever, contracted in all probability in Pretoria. So far the disease is running a mild course. With regard to the cases of enteric fever the frequency of phlebitis in the convalescent stage is to be particularly noted. The frequency of this complication here is considerably greater than in ordinary civil practice. Suppurative otitis media is also far from uncommon. In two cases complicated with malaria the tertian parasite has been demonstrated as well as Widal's reaction. A few cases of acute dysentery and many of chronic dysentery have been admitted and all the patients have done well. Experiments are now being carried out with various native remedies in the treatment of dysentery, hitherto with no very striking results, but the cases have been comparatively few in number. A fuller report will follow at a later date.

No fresh case of scarlet fever has developed in hospital for over four weeks. Suspicious cases, and a few in which the diagnosis is beyond suspicion, still continue to be

admitted. Cases of heart and renal disease have increased in number to a considerable extent since the last report. Of the former a few are instances of valvular disease arising during an attack of acute rheumatism, but the majority are examples of failure of compensation due to the strain of hard work and exposure on an already damaged heart. To the same causes our cases of acute kidney affection can be traced. Rheumatism, especially the subacute articular and muscular varieties, is still very common. It is interesting to note that in the great majority of the former and in many of the latter there is a history of previous acute rheumatism. Acute rheumatism is, and has been, conspicuous by its absence, though many patients convalescent from the disease have been admitted. Dr. Elliot remarks that from what he has seen here he would be inclined if examining men for war purposes to reject all, or nearly all, those who have passed through an attack of rheumatic fever. The selection of men for the Yeomanry battalions has apparently been made on specially liberal lines. Many cases of old-standing valvular and renal disease have come out and one man arrived in hospital with an unhealed nephrotomy wound with which he had left home. Other patients have come under my own care who have been passed and sent out for active service in the field, the condition of whose eyes and sight should have led to their rejection.

Deelfontein, Nov. 10th.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Annual Report of the Medical Officer of St. George-the-Martyr, Southwark, for 1899.—The population of the above metropolitan parish at the last census showed a low rate of increase compared with that of London generally. That fact is accounted for by the disproportionate mortality and not by the birth-rate, which in 1899 was 5·8 per 1000 above that for the whole of London and 5 per 1000 above that for the 33 large towns. The total population of the parish at the last census in 1896 was 60,278, as against 59,712 in 1891. In 1899 the population density of St. George-the-Martyr was rather over 213 to the acre, that is to say, about four times that of London generally, and 400 times that of the United Kingdom. The death-rate for 1899 is abnormally high, being 27·7 per 1000 living. Analysis shows that the brunt of the mortality falls upon the Borough-road sub-district, in which the rate was 34·8 per 1000, as against 23·5 for the London-road and 26·6 for the Kent-road sub-districts. Further, the average for the years 1892 to 1896 in those sub-districts showed the Borough-road rate to be 31·4 per 1000, compared with London-road 20·6 and Kent-road 22·3. This interesting method of analysis leads Dr. F. J. Waldo to remark: "Were it possible to eliminate the Borough sub-district or to reduce its mortality to a level with that of the other sub-districts the condition of St. George-the-Martyr as a whole would compare favourably with many districts much more happily situated, both as regards density of population and general happiness of surroundings." In the ten years 1841 to 1850 the average death-rate of the parish stood at 30 per 1000, as against 25 for the whole of London. In 1899 it was 27·7, against 19·3. For last year, indeed, St. George-the-Martyr stands in a worse position with regard to the London death-rate than it has stood in any ten-yearly period since 1840. Diarrhœa has been answerable for more deaths than any other of the principal zymotic diseases during the eight years 1892 to 1899. Dr. Waldo's conclusion as to the origin of this malady, announced in the Milroy lectures for 1900, attributed the infection to contamination of food, air, and general environment of towns by street-dust specifically contaminated by bacteria from horse-dung. In connexion with the recent outbreak of enteric fever in the parish it is interesting to note that in March, 1898, Dr. Waldo urged the vestry to establish a free bacteriological service for the early diagnosis both of typhoid fever and of diphtheria. In neither case has the recommendation been acted upon. The report before us will be notable in the history of the ancient parish of St. George-the-Martyr, as it represents the last official year of separate existence as a local authority. The opportunity has been taken to draw up a short summary of progress in public health matters that has been made during the seven years and seven months of Dr. Waldo's tenure of office. Disinfection is now carried out by means of a steam disinfector of the best modern type, the special staff has been increased, and a shelter has been provided for infected families. Lavatory accommodation has been greatly increased. A large number of houses unfit for human habitation have been closed and a large unwholesome area, that of Falcon court, has been dealt with by the London County Council. The sanitary staff has been increased from two inspectors and a third officer, who acted as mortuary-keeper and disinfector, in 1892, to one chief and three district inspectors, two women inspectors to carry out the tenement by-laws, two caretakers of the Reception House, and a sanitary clerk. This staff is still inadequate for so large and crowded a parish. The important question of the sanitary control of the Salvation Army shelters by the local authorities has to a great extent been fought out in Southwark. In 1890 the late Lord Coleridge decided that the Salvation Army shelter was not a common lodging-house. In 1893 small-pox was traced to the Blackfriars shelter, the keeper of which was prosecuted by the St. George's authority for neglecting to disinfect. The magistrate convicted, but his decision was reversed on appeal. In this way it was shown that efficient disinfection could not be insisted upon under the Public Health Act. In 1895 small-pox was again traced to the shelter, but the medical officer of health having been refused admission at night obtained entry later by a magistrate's warrant. The question thus opened up was carried to its conclusion by the London County Council in 1898. On appeal in December, 1899, the High Court of Justice decided that the shelters were common lodging-houses and therefore were subject to public sanitary control. Among the special reports is an interesting one dealing with a case of typhus fever and its origin. The original case was notified on Feb. 20th, 1899, and was found to have come from Bermondsey. In the previous year two cases of typhus fever, one in April and one in October, had occurred in the parish of St. George-the-Martyr, and some members of one infected family, the second case, had gone to Bermondsey. Careful inquiry revealed a direct chain of infection between the case in October, 1898, and the case in February, 1899. At least 12 cases were found; they had been treated at various hospitals and at home for enteric fever, delirium tremens, and other supposed maladies, but only in one or two instances was the typhus fever recognised at the time. This record is suggestive in many ways and emphasises the rarity of the disease nowadays in the metropolis. The medical officer may be congratulated upon the amount and the degree of good work accomplished since he has held his official post in the parish. In the matter of the control of bakehouses, especially when underground, he has been specially active, and his reports, no doubt, influenced the legislation that has been enacted within the past few years in that direction.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN 33 of the largest English towns 6082 births and 3937 deaths were registered during the week ending Dec. 8th. The annual rate of mortality in these towns, which had risen from 16·9 to 18·0 per 1000 in the four preceding weeks, declined again last week to 17·7. In London the death-rate was 17·5 per 1000, while it averaged 17·8 in the 32 provincial towns. The lowest death-rates in these towns were 11·5 in Croydon, 11·8 in Cardiff, 13·6 in Portsmouth, and 14·4 in West Ham; the highest rates were 21·2 in Sunderland, 21·5 in Sheffield, 21·9 in Liverpool, and 22·1 in Hull. The 3937 deaths in these towns included 363 which were referred to the principal zymotic diseases, against 351 and 356 in the two preceding weeks; of these, 98 resulted from diphtheria, 91 from whooping-cough, 55 from "fever" (principally enteric), 51 from measles, 35 from scarlet fever, and 31 from diarrhœa. No death from any of these diseases occurred last week in Birkenhead, Huddersfield, or Gateshead; in the other towns they caused the lowest death-rates in Croydon, Sunderland, and Newcastle, and the highest rates in Swansea, Blackburn, Preston, and Sheffield.

The greatest mortality from measles occurred in Swansea; from scarlet fever in Burnley; from whooping-cough in Nottingham, Derby, Preston, Halifax, and Hull; from "fever" in Plymouth, Wolverhampton, and Preston; and from diarrhœa in Blackburn. The 98 deaths from diphtheria included 34 in London, 14 in Sheffield, eight in Leeds, and eight in West Ham. No fatal case of small-pox was registered last week in any of the 33 towns, and only one small-pox patient remained under treatment in the Metropolitan Asylums hospitals on Saturday last, Dec. 8th. The number of scarlet fever patients in these hospitals and in the London Fever Hospital at the end of the week was 2687, against 2725 and 2727 on the two preceding Saturdays; 259 new cases were admitted during the week, against 261, 246, and 279 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 322 and 436 in the two preceding weeks, declined again last week to 400, and were 48 below the corrected average. The causes of 56, or 1·4 per cent., of the deaths in the 33 towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Croydon, Oldham, Leeds, Sunderland, and seven other smaller towns. The largest proportions of uncertified deaths were registered in Leicester, Liverpool, Halifax, and Sheffield.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had increased from 19·2 to 21·7 per 1000 in the four preceding weeks, declined again last week to 20·7, and showed an excess of 3·0 per 1000 over the mean rate during the same period in the 33 large English towns. The rates in the eight Scotch towns ranged from 17·2 in Leith and 17·4 in Dundee to 21·9 in Perth and 23·1 in Edinburgh. The 641 deaths in these towns included 31 which were referred to whooping-cough, 18 to diarrhœa, 15 to measles, nine to scarlet fever, nine to diphtheria, four to "fever," and one to small-pox. In all 87 deaths resulted from these principal zymotic diseases, against 69 and 89 in the two preceding weeks. These 87 deaths were equal to an annual rate of 2·8 per 1000, which was 1·2 above the mean death-rate last week from the same diseases in the 33 large English towns. The fatal cases of whooping-cough, which had increased from 13 to 42 in the eight preceding weeks, declined again last week to 31, of which 18 were registered in Glasgow and five in Greenock. The deaths from diarrhœa, which had been 20 and 19 in the two preceding weeks, further declined to 18 last week, and included six in Glasgow, three in Edinburgh, three in Dundee, and three in Aberdeen. The fatal cases of measles, which had been eight and 12 in the two preceding weeks, further rose last week to 15, of which nine occurred in Edinburgh and four in Aberdeen. The deaths from scarlet fever, which had been five in each of the two preceding weeks, increased to nine last week, and included five in Glasgow and three in Edinburgh. The fatal cases of diphtheria, which had been four and six in the two preceding weeks, rose last week to nine, of which five were registered in Glasgow, two in Edinburgh, and two in Aberdeen. The four deaths referred to "fever" corresponded with the number in the preceding week, and were all recorded in Glasgow, where the fatal case of small-pox was also registered. The deaths referred to diseases of the respiratory organs in these towns, which had been 156 and 160 in the two preceding weeks, declined again last week to 151, and were slightly below the number in the corresponding period of last year. The causes of 25, or nearly 4 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 26·1 and 24·5 per 1000 in the two preceding weeks, rose again to 27·4 during the week ending Dec. 8th. During the past four weeks the death-rate in the city has averaged 26·0 per 1000, the rates during the same period being 17·4 in London and 20·3 in Edinburgh. The 184 deaths belonging to Dublin registered during the week under notice showed an excess of 20 over the number in the preceding week, and included 11 which were referred to the principal zymotic diseases, against 19 and 11 in the two preceding weeks; of these, four were referred to whooping-cough, three to "fever," three to diarrhœa, and one to scarlet fever. These 11 deaths were equal to an annual rate of 1·6 per 1000, the zymotic death-rate during the same period being 1·5 in London and 3·3 in Edinburgh. The fatal cases of whooping-cough, which had been five and six in the two preceding weeks, declined again to four last week. The deaths referred to different forms of "fever," which had been eight and three in the two preceding weeks, were again three last week. The fatal cases of diarrhœa, which had been five and one in the two preceding weeks, rose last week to three. The 184 deaths in Dublin last week included 41 of infants under one year of age and 45 of persons aged upwards of 60 years; the deaths both of infants and of elderly persons showed an excess over the numbers recorded in the preceding week. Four inquest cases and four deaths from violence were registered, and 64, or more than a third, of the deaths occurred in public institutions. The causes of 18, or nearly 10 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments are notified:—Surgeons: Walter H. S. Stalkartt to the *Alacrity*; Hugh S. Burniston to the *Duke of Wellington*, additional for Portsmouth Dockyard; H. W. W. Townsend to the *Blenheim*; and E. T. Meagher to the *Briton*.

Fleet Surgeon Henry L. Crocker, of the *Britannia*, medical officer of the Naval Cadets' Training Establishment, is selected for appointment to the *Royal Arthur* when recommissioned as flagship of the Australian station.

ROYAL ARMY MEDICAL CORPS.

Major Fausset Maher Baker retires on retired pay.

MILITIA.

Royal Garrison Artillery: The Mid Ulster Artillery (Southern Division): Surgeon-Lieutenant-Colonel W. Twigg retires under paragraph 81 Militia Regulations, with permission to retain his rank and to wear the prescribed uniform on retirement.

ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Major A. Kinsey Morgan resigns his commission.

VOLUNTEER CORPS.

Artillery: 2nd Devonshire (Western Division, Royal Garrison Artillery): Surgeon-Lieutenant-Colonel J. May resigns his commission, with permission to retain his rank and to wear the uniform of the corps on retirement. 1st Warwickshire: The undermentioned officer is removed from the Volunteer Force, Her Majesty having no further occasion for his services:—Surgeon-Lieutenant S. P. Johnson. *Rifle:* 4th Volunteer Battalion the King's (Liverpool Regiment): Surgeon-Lieutenant-Colonel W. S. Limrick resigns his commission, with permission to retain his rank and to wear the uniform of the battalion on retirement. 8th (Scottish) Volunteer Battalion the King's Liverpool Regiment: Archibald Gordon Gullan to be Surgeon-Lieutenant. 1st Lanarkshire: James Grant Andrew to be Surgeon-Lieutenant. 2nd Volunteer Battalion the Sherwood Foresters (Derbyshire Regiment): Vernon John Greenhough to be Surgeon-Lieutenant. 17th (North) Middlesex: The undermentioned Surgeon-Captains resign their commissions:—P. S. Spokes and J. W. Pare. 16th Middlesex (London Irish): Surgeon-Captain A. G. Bateman resigns his commission.

TRANSVAAL WAR NOTES.

Mr. Vernon Cargill has returned to England after an absence of ten months, during which time he has served as ophthalmic surgeon to the Imperial Yeomanry Hospital in South Africa.

Civil Surgeons R. Ward, A. Breslin, C. Gibbs, H. J. Scharlieb, and W. W. Woolliscroft have returned invalided to England in the transport *Yorkshire*. Civil Surgeon Gordon Watson is returning home in the *Carisbrooke Castle*. Civil surgeons E. A. Nathan, E. M. Pearse, and A. N. Weir left South Africa on Dec. 6th in the *Manhattan*.

The Princess of Wales went to Southampton on Dec. 10th to visit the hospital ship bearing her name, which arrived from the Cape on Dec. 8th with 170 invalids in charge of Captain A. Pearse, R.A.M.C. Her Royal Highness briefly conversed with all the patients.

Civil Surgeon H. Hartley (Levat's Scouts) is reported convalescent at Cape Town.

THE SPECIAL ARMY ORDER REWARDING THE TROOPS.

A special Army Order has been promulgated from the War Office to the effect that the Secretary of State has decided that a special war gratuity should be issued to all the troops, whether Imperial or Colonial, employed in the operations in South Africa. The unit of the scale will in all cases be £5, which will, therefore, be the minimum sum to which any soldier will be entitled. A table setting forth the number of shares or units assigned to the different ranks—from that of a Field-Marshal downwards—together with an explanatory statement, is published for general information, so that everybody concerned can calculate the amount of the gratuity to which he is entitled. The total, considering the numbers who have taken part in the war, will reach a good sum, but the taxpayer, instead of grudging the outlay, will, we believe, pay it with a hearty goodwill. It has been well earned, for it has been a most arduous and trying war from start to finish—that is when it is actually as well as virtually finished. Lord Roberts has told the nation his opinion of the troops who have served under him—namely, that the soldier was a hero in the battlefield and a gentleman elsewhere. In addition to all the fighting there has been an unprecedented amount of marching, and no one can have read the description of what the troops have been undergoing in their last chase of De Wet without realising the labour and hardships which this war has entailed. It has proved the very opposite of what was once a popular affix to the signboards of hotels and country inns—"good entertainment for man and beast." We trust that has yet to come for all our soldiers and medical and other officers who have suffered the risks and fatigues and who survive all the dangers of this war.

MENTIONED IN DESPATCHES.

Sir Claude MacDonald, in his despatches relating to Pekin, refers to Dr. Morrison, the *Times* correspondent, who acted as lieutenant to Captain Strouts and rendered most valuable services. He was, says the despatch, active, energetic, and cool; he volunteered for every service of danger and was a pillar of strength when matters were going badly. He was severely wounded on July 16th by the same volley which killed Captain Strouts, and his valuable services were lost to the defence for the rest of the siege. The services of Dr. Poole, Legation surgeon, and Dr. Velde of the German Legation, are also referred to. These gentlemen were in charge of the International Hospital, and during the siege 166 cases passed through their hands, 20 of the patients suffering from illness and the rest severely wounded. Owing to the devotion and skill of these two medical officers 110 of the wounded were eventually discharged cured, notwithstanding that towards the end of the siege, the resources of all the dispensaries proved unequal to the strain. Dr. Poole, continues the despatch, speaks most highly of the sick-berth steward, Fuller, of Her Majesty's ship *Orlando*, and his commendation is fully endorsed by Dr. Velde and all the besieged. From personal observation Sir Claude Macdonald says that his care and gentle treatment of the wounded and the willing and cheerful manner in which he carried out his duties were beyond all praise.

THE SYRACUSA CONVALESCENT HOME FOR WOUNDED SOLDIERS, TORQUAY.

At a meeting of the subscribers of the Syracusa Convalescent Home held at Torquay on Dec. 5th it was stated that since the opening of the home at the beginning of the year 127 soldiers had been admitted representing 50 different regiments. During the five months July to November the average daily number of patients were 31, and the average weekly cost per head was 8*s.* 3*d.* The credit balance at the end of November amounted to £1730. Colonel Stovell, the honorary secretary, said that the conduct of the men had been splendid. In the words of Lord Roberts their bearing had been that of heroes and their manners those of gentlemen. Colonel Stovell further alluded to thoughtless people who gave the soldiers drink, and quoted a case where a person gave a man a bottle of brandy which he was urged to hide in his bedroom in case he felt ill and needed it, the result being that the man became mad with drink and threatened to commit suicide.

OUR LOSSES IN SOUTH AFRICA.

According to a War Office return the total reduction of the military forces through the war in South Africa up to, and inclusive of, November has amounted altogether to 14,178, of which number considerably under 12,000 have been from deaths—either killed in action or from wounds or from disease contracted on service. Looking to the duration of the war, the numbers engaged, the continuous fighting of some sort or other and somewhere or other in the theatre of war, and other circumstances, these figures do not seem so large as might have been expected.

THE PASTEUR INSTITUTE AT KASAULI.

This institute, which has been recently opened at Kasauli under the management of Major D. Semple, R.A.M.C., for the Pasteur treatment of soldiers and others, is, we are glad to say, popular and is apparently doing a great deal of good. Up to Nov. 4th last 75 patients had presented themselves for treatment and 62 had completed their course, while 13 were under treatment. The 75 patients comprised seven British officers, 25 soldiers, and one soldier's child, one native officer, four native soldiers, 12 European civilians, and 25 native civilians.

ST. JOHN AMBULANCE ASSOCIATION.

The St. John Ambulance Brigade is despatching 100 more hospital orderlies for service in South Africa, having received a further requisition from the War Office to that effect. This is in addition to the 68 extra brigade men dispatched a fortnight back at Lord Roberts's request, and brings the total of its members on active service up to 1739. Over 60 members of the brigade have, we regret to say, died from enteric fever and other diseases.

DEATHS IN THE SERVICES.

Surgeon-General G. V. Currie, late I.M.S., in London, on Dec. 3rd, aged 72 years. He served in the Indian Mutiny campaign against the Momunds on the North-west Frontier in 1858, in the Eusofzai and Swat Expedition of 1866, and in the Afghan War of 1879.

Captain William Pearson Barter, R.A.M.C., at Agra, aged 34 years. He was the only surviving son of Brigade-Surgeon J. F. Barter (retired), of Beneden, Harlesden, N.B. He joined the Army in 1893 and became Captain in 1896.

John Grant, M.B., C.M. Edin., has been appointed temporary surgeon to H.M. forces now operating in Ashanti.

Correspondence.

"Audi alteram partem."

NEW-LAID EGGS AND FRESH EGGS.

To the Editors of THE LANCET.

SIRS,—In the interesting annotation which you have given us on the "new-laid" and "fresh" egg question, arising out of the recent correspondence in the *Times*, you have not (any more than the *Times* correspondents) given scope to a solution of the difficulty which certain early recollections of my own lead me to believe deserves more attention than has been hitherto assigned to it. I admit that the "trader" and his conventional nomenclature (with a view to charges and profits) has no part in my experiences, which centre round a very dear old relative long since passed away, who in my boyhood used to supply us with "fresh" eggs on a system of her own—not unknown indeed to others, but practised by her with a carefulness which gave it a place quite apart from commercial experience. Her plan was simply to grease all her eggs—not, observe (for to this she attached great importance), within the first 24 or any number of hours, but *the instant they were laid and before they had time to cool*. The pores of the egg being thus effectually sealed up before any chemical change had time to take place, the practical result, as I have tested over and over again, was that the eggs remained "fresh" (by which I mean that they retained the creamy quality of the albumen to which you refer), not for hours or for days, but for weeks and, I believe, for months, during which the eggs, though not "new-laid," were emphatically as "fresh" to the taste as if they had been eaten an hour after being laid. This I know to be the fact because it was one of this old lady's business-like ways that on an immensely long egg-rack she had every egg marked with the date of laying at the

very moment of its being submitted to her preservative process; and although I do not claim to have investigated the matter scientifically, I do know as a fact that an egg, say, three weeks or six weeks old as by date, could absolutely not be distinguished by the taste from one laid only the day before, or even on the same day, as it was served up to breakfast. I have often wondered that my dear old relative did not make a more definitely "trading" use of her system, or that no other more commercial genius followed in her footsteps and boldly placed upon the market eggs which, though not "new-laid," were "fresh" in the best sense of the word. The system, indeed, required constant watchfulness, for if the egg was allowed to cool the chance was lost. But it should not be beyond the resources of a company of poultry-farmers to supply London with eggs guaranteed to be "fresh"—and only such—without reference to the exact date, the fact of freshness being tested as you describe, by the "ooscope" or otherwise. In short, if it is possible to preserve eggs indefinitely in the way here described it should be done, and all the resources of science should be applied to getting it done properly and securely. A company which could at once make *sure* that *all* eggs which it placed upon the market, independent of date, were fresh in the sense described might ask the highest prices and would be certain to get them, because the eggs would not need classification.

I am, Sirs, yours faithfully,

Edinburgh, Dec. 10th, 1900. W. T. GAIRDNER.

"ISOLATION HOSPITALS."

To the Editors of THE LANCET.

SIRS,—It is to be feared that the readers of your valuable journal will gather from your remarks that I have merely expressed an opinion which may be met by the expression of an opposite opinion. If a system is not to be judged by results, by what standard shall we measure it? But if it may be so judged, then I claim that I have brought the failure of the isolation hospital, so far as scarlet fever is concerned, to an absolute demonstration. Being no great believer in statistics, there are yet, I hold, certain figures which are inexorable. The "returns" of the Registrar-General and the annual returns of the number of notified cases of medical officers of health cannot be ignored. On these, and these only, I have made out my case, and with deep respect for your opinion it is, I submit, a case which will have to be answered, and authoritatively answered. You place before your readers three reasons—which I can only regard as three excuses—for the existence of these hospitals—namely, (1) to minimise the risk of infection from invaded houses to the rest of the community; (2) to enable the sick to be separated from the healthy and the healthy to proceed to their occupations; and (3) to provide for better medical control and nursing than is possible in the homes of the poor.

With reference to the last position I may say at once that the isolation hospital is a preventive institution or nothing. It was certainly never designed to be a mere nursing institution for the poor. Had it been so intended it would have taken its proper place under the ægis of the Poor-law. As a matter of fact, the rich have frequently been admitted to whatever its advantges may be, to the exclusion of the poor. It is an entirely new reading of the ends and aims of isolation hospitals to include better medical attendance and nursing amongst the objects to be attained. With reference to the first position, I say that the risk from invaded houses has *not* been minimised, but, on the contrary, has been increased by "return" cases. We have all seen examples of houses being kept centres of infection for many months from this cause.

I have long held the opinion—take it for what it is worth—that discharged patients are *all* a source of danger to the community and that the period during which they remain in an infective condition is extended far beyond the limits of time exhibited by cases nursed at home, be the surroundings what they may. The definition of a "return" case has successfully covered up the formidable public danger which these cases undoubtedly constitute. I have a list of 250 cases which received their infection through the medium of a hospital, many of which were treated in the hospital itself, but only a dozen of which appeared in the annual report as "return" cases. I have called attention to the high mortality rate of "return" cases, as pointed out by Dr. C. K. Millard, Dr. P. Boobbyer, and others. As to the second position, if you are unable to guarantee freedom from infection on discharge from the hospital what becomes of "enabling people brought in contact with the patient to go to work, school," &c.? You know that this cannot be guaranteed. No secret is made of the fact. Here is the handbill sent to the friends of patients admitted into our isolation hospital:—

NOTTINGHAM CORPORATION. BAGTHORPE HOSPITAL. SCARLET FEVER.
To Parents, Guardians, and Others.

Although every care is exercised to prevent the carriage of infection by persons discharged from Bagthorpe Hospital it is impossible in some instances to insure against such an accident, for no one can say with certainty how long scarlet fever may lurk in the system. Parents and others are warned against allowing recently discharged patients to come into unnecessarily intimate contact with others. No person discharged from a fever hospital should be allowed to sleep in the same bed as another until at least a fortnight after discharge. A short holiday in the country with plenty of fresh air, apart from others, is always desirable after convalescence from scarlet fever. But all persons recovering from scarlet fever should be warmly clothed and otherwise protected against cold. Any recently discharged person who complains of sore-throat, nose, or ears, or who has a breaking out on the skin, should be at once isolated and placed under the care of a medical man. In any case the corporation cannot accept responsibility or liability for the outbreak of infection occurring among the companions of persons recently discharged from hospital.

PHILIP BOOBBYER, M.B., Medical Superintendent.

One of the leading sanitarians in this country wrote to me last week saying that he could not conceive a more humiliating or tragic confession. Nor can I. When sanitary authorities hold out such danger signals as these surely the time has arrived to investigate, and if the investigation results in the accumulation of evidence which points to complete and universal failure, shall we ignore it? If it is proved that to aggregate cases of infective disease means the spread of disease, are we, as scientific men, under any pretext whatever to seek to excuse the carrying out of a system which has thus been weighed in the balance and found wanting? We know that it is happening every day that discharged patients are sowing scarlet fever broadcast in schools and elsewhere. You attribute this to defective administration. I am of a different opinion. I have shown that "return" cases are more often the result of lengthy detention than premature discharge. In our splendid new hospital the administration is well-nigh perfect, but we are no exception to the rule. What must be the case in towns where no warning is given of the danger run by being brought in contact with discharged patients and where, under a sense of security, these patients are allowed to mix freely with others? I leave your readers to judge. Their judgment will be assisted by a reference to the number of cases annually notified in the 32 large towns of England and Wales and London. Taking the latter city first we find that in 1891 there were 11,330 cases of scarlet fever notified in the registration county of London. The next year there were 27,093 cases and the year following 36,901. Liverpool in 1891 had 1176 notified cases. The next year she had 1554 and the following year 3538. Manchester commenced in 1891 with 1138 cases. In 1892 she had 1671 and in 1893 2031. Birmingham's figures run: 1892, 1418; 1893, 1614; 1894, 1788; 1895, 2964; and 1896, 3389. Leeds began in 1894 with 758 cases (eight months). In 1895 she had 874; in 1896, 1216; in 1897, 1791; and in 1898, 2002. Nottingham, which boasts the highest percentage of removals combined with lengthy experience of isolation, divides the honours with Bolton as providing the most complete object-lesson. Bolton, coming under notification so far back as 1879, and commencing her career without the advantages (?) of hospital accommodation, provides a useful example of how a town fares before and after. The figures are therefore given *in extenso* in these two instances.

Nottingham.

Year.	Cases notified.	Percentage of removals.	Year.	Cases notified.	Percentage of removals.
1883	428	—	1892	1163	88·0
1884	384	—	1893	1511	70·0
1885	390	12·0	1894	1164	80·0
1886	351	15·0	1895	1250	93·0
1887	615	45·0	1896	731	86·0
1888	643	49·0	1897	517	90·0
1889	1047	71·0	1898	931	71·0
1890	984	81·0	1899	2580	48·0
1891	895	86·0			

The population has increased by one-fifth during this period.

Bolton.

Year.	Cases notified.	Percentage of removals.	Year.	Cases notified.	Percentage of removals
1879	404	—	1890	1071	24·9
1880	702	—	1891	411	27·0
1881	330	—	1892	683	22·8
1882	259	—	1893	747	21·4
1883	103	—	1894	367	49·4
1884†	303	—	1895	495	31·1
1885	186	47·3	1896	816	35·7
1886	322	59·9	1897	645	40·4
1887	721	40·4	1898	487	53·5
1888	924	30·1	1899	1226	41·0
1889	1256	23·2			

† Hospital opened.

It will be seen that the percentage of removals bears a more or less definite ratio to the number of cases so far as the former town is concerned, while in the latter (which was doing well without an aggregative institution) the opening of the hospital was signalised by an increase in the number of notified cases too gradual to leave us in doubt as to the cause. It is the fashion to speak of isolation hospitals as though they had existed from time immemorial, whereas many large towns have only had nine or ten years' experience of them and one—Leeds—only five, and in some of the large towns isolation is a dead letter to-day. These towns are at least as well off as Nottingham, Bradford, and other places where a high removal percentage has been the forerunner of endemic fever. I think it strange that when this system is attacked nobody attempts to defend it by the production of facts which tell in its favour. It is generally considered sufficient to meet the attack with a direct negative. It will occur to the unbiased reader that it is not enough to say that the system is a success, and he will feel with me that the importance of the subject demands that tangible proof shall be forthcoming that these institutions have in some remote corner of the earth done what is claimed for them. Where are we to look for the evidences of prevention which these "preventable" institutions have brought about? If they exist surely it will not be difficult to point them out. That this has never yet been done is at least evidence *prima facie* that no such facts are obtainable.

You ask, Sirs, how I propose to deal with cases of plague and refer to the Great Plague of London. Dr. J. F. Payne in Allbutt's "System of Medicine" says that "under some circumstances the patient might be better isolated in his own home," but the question is too large to be dealt with here. It is surely not contended, however, that isolation hospitals—affairs of the last two decades—are responsible for the fact that the plague has not (till quite recently) visited these islands since 1665. If the ascertainable results of "isolating" cases of plague demonstrated that these precautions were instrumental in increasing the number and mortality of cases—as in the case of scarlet fever—I should not hesitate to denounce the system as a failure.

I am, Sirs, yours faithfully,

Dec. 10th, 1900. EDWARD DEAN MARRIOTT.

"THE WORKMEN'S COMPENSATION ACT, 1897: TWO VIEWS."

To the Editors of THE LANCET.

SIRS,—I gather from the editorial note at the head of the two articles under the above heading published in THE LANCET on Oct. 27th, p. 1227, that you, with your unique facilities of gauging medical opinion, consider that in the view of the medical profession grave miscarriages of justice do now occur, and must in future continually recur unless the fundamental safeguard of the Act is made compulsory—namely, that the medical referees called into being and initiated by the Home Office shall have their services called into requisition as was originally intended by the Act. In fact, the profession is agreed on the following points:—

1. That the non-employment of the medical referees appointed under the Act has been detrimental to the interests of both employers and workmen.
2. That medical referees would be more useful if they sat as medical assessors with the county court judges than if they only made a written report.
3. That the early reference to medical referees of cases in which no legal question is in dispute and in which there is a difference of opinion as to the amount of injury would save the time of the judges and much money to both employers and workmen.
4. That in the interests of the public generally the effects of accident should be differentiated from the effects of pre-existing disease.
5. That in every case the amount of injury should be assessed by an impartial medical man unconnected in any way with either employer or workman or with any society to which either belongs.

I shall be glad to hear your views authoritatively spoken as to the position of resident medical officers in hospitals, for at present house surgeons and other resident medical officers hold positions which could with difficulty be filled by others, they being on the spot and thoroughly conversant with the cases under their charge. I have never known hospital officials to be otherwise than absolutely impartial, and the opinions which they have given have to my knowledge saved an immense amount of litigation. Employers do not resist claims which they know to be *bonâ-fide* and workmen cannot impose on employers when their injuries have been under observation by impartial medical men from the first.

I fully understand that it is impossible for you to insert individual opinions, but I feel sure that you are now in a position to judge rightly as to the questions raised and as they are of great interest to medical men and will be of still greater interest in the future I ask you to give, as you have so often done before, guidance which the profession as a whole may accept as authoritative.

I am, Sirs, yours faithfully,

ALBERT BENTHALL, F.R.C.P. Edin.

Cockspur-street, S.W., Nov. 24th, 1900.

ARSENIC IN BEER.

To the Editors of THE LANCET.

SIRS,—My attention has been called to the fact that in the "Notes on Recent Beer Poisoning in Salford," published in THE LANCET of Dec. 1st, I had in no way acknowledged the intimation stated to have been given me by Dr. Kelynack as to the presence of arsenic in inverted sugar. I was unaware until to-day that the verbal intimation had been left at my office, although I knew that Dr. Kelynack had called on me on Nov. 23rd, when he failed to see me, as I was absent pursuing the inquiries which resulted from Professor Delépine's discovery on the 22nd of the presence of arsenic in a sample of glucose. Although Dr. Kelynack's information reached me too late to be of use, I would have acknowledged the trouble he had taken to inform me what Mr. Kirkby had found had I been acquainted with the nature of the statement he had made to my clerk in my absence.

I am, Sirs, yours faithfully,

C. H. TATTERSALL,

Salford, Dec. 7th, 1900. Medical Officer of Health, Salford.

To the Editors of THE LANCET.

SIRS,—There is no doubt that substances enter into the composition of modern beer which interfere with the usual methods of analysis for the detection of arsenic. This must have forcibly struck every chemist who has analysed beer for the presence of arsenic, as very many have, in beers brewed from arsenical glucose, and failed to detect it. Two of the nostrums used in the brewing of modern ales are finings, which are "cut" with sulphurous acid, and bi-sulphites of lime and magnesia, &c. These are both used as preservatives either in washing the barrels or by adding direct to the beer. If chemists had been acquainted with the presence of these in beer much less difficulty would have been felt in dealing with arsenical beer. Both these compounds will prevent the discovery of arsenic in beer by the Marsh test and by the Reinsch also, for unless the beer is boiled some time with acid before putting in the copper the sulphurous acid in the beer will produce the blackening.

Beers brewed from malt, hops, and glucose may be used direct in the Marsh apparatus, and if arsenic is present it will be detected. I have tried the experiment upon beer before racking when sulphurous acid had not been added. Thus it is not organic matter alone which makes arsenic in beer so difficult of detection, which I proved by taking a beer absolutely free and adding to it a known quantity of arsenious acid. In the Marsh apparatus I got out practically all I had introduced. To another

portion of the same beer, with arsenic in such proportion as gave a large deposit in the heated tube, I added a very small quantity of a bi-sulphite of calcium, and got no deposit of arsenic on the heated tube, only sulphur appearing there. The arsenic was obtained from the flame at the end of the tube when received on porcelain. The difficulty in connexion with the 12 samples of Manchester beer is now explained. I had to do the samples in a day. I did take 12 working hours and knowing nothing of the presence of sulphite I found no arsenic. I may say that I had only about 11 ounces per sample, and in the small quantities which I used for experiments the trace of arsenic was probably lost in the preparation of the beer for the Marsh test. I may premise that I tried a series of experiments with the original beer. Any test to succeed must deal with not less than 100 cubic centimetres, and this should be charred *only to intumescence* with acid, then diluted and filtered, and the filtrate evaporated. I did this process in flasks, but found that the medical officer here was doing the process in porcelain basins which I now adopt. If one omits to evaporate the filtrate sulphurous acid may easily be present (carbonaceous matter and sulphuric acid) and spoil the experiment.

I am, Sirs, yours faithfully,

CHARLES ESTCOURT,
Public Analyst to the City of Manchester.

Manchester, Dec. 10th, 1900.

To the Editors of THE LANCET.

SIRS,—The obscure nature of chronic poisoning by small doses of arsenic has been shown in a startling manner by the wholesale beer-poisoning outbreak in Manchester. Does not the revelation point a moral as to the harm that may be done by administering small doses of arsenic in medicine over a prolonged period? That arsenic is an irritant to the kidneys, skin, mucous membranes, and all other excretory outlets to the body has long since been experimentally established. Yet the drug is given daily by medical men and its use is extended over long periods of time. In one case under the writer's care a patient had been treated with arsenic for years at various skin hospitals. He is suffering from chronic Bright's disease, which, in the absence of other assignable cause, may, not unreasonably, be attributed to the arsenic. It is a well-known fact that during a course of arsenic a patient's urine may become albuminous. So strongly have I felt upon this subject that personally I have practically ceased for years past from prescribing arsenic either in hospital or in private practice. It has been said somewhere that arsenic never yet cured a skin disease—a dictum with which most dermatologists will be inclined to agree—although it undoubtedly now and then appears to modify favourably some cutaneous troubles. The question arises, is it worth while for the sake of this remote possibility to expose a patient to the risk of grave mischief from the action of a virulent irritant poison upon excretory and other organs? Given in minute doses for a short time the drug certainly appears to exercise a beneficial effect in some cases of anæmia.

In my own case arsenic has a curious effect. I have on various occasions experimentally taken five minims of liquor arsenicalis and within 12 hours a fine punctate irritating rash appears on the back of the wrists. I have little doubt that arsenic is answerable for some at least of the cases that present themselves at the skin hospitals. Supposing a patient suffering from arsenical beer rash, so to speak, went to a hospital in Manchester there would have been no clue as to the nature of that eruption prior to the discovery of the poison at the breweries.

I am, Sirs, yours faithfully,

Bentinck-street, W., Dec. 4th, 1900. DAVID WALSH.

PREVENTIVE INOCULATIONS AGAINST THE PLAGUE.

To the Editors of THE LANCET.

SIRS,—A course of three lectures on bubonic plague was recently delivered in London at the Examination Hall of the Royal Colleges of Physicians and Surgeons by Professor Calmette, Director of the Pasteur Institute at Lille.[1]

In the third of these lectures Professor Calmette described a new method of preparing a prophylactic against plague, the product being a substance which possesses (in accordance with Professor Calmette's statements) the advantages that its strength can be easily determined and that it may be kept for a considerable time without becoming contaminated and without losing any of its immunising properties. In this way he thinks that he has solved the problem of obtaining an easy and sure inoculation against the plague—a description which does not apply to Professor Haffkine's prophylactic.

Professor Calmette's method consists in filtering off the plague microbes from their culture media, drying them, and keeping the dried substance carefully in sealed bottles. This substance can be easily weighed and dissolved in water, and it is then ready to be used for inoculation.

In connexion with this subject I must advance the claim that a dried "vaccine" against the plague of definite strength and admitting of preservation was for the first time prepared by myself in collaboration with Dr. Galeotti, as is shown by papers published in different periodicals in 897 and 1898.[2]

The method followed by us can be briefly described. When plague microbes are cultivated on large agar-agar plates they form a thin layer which is scraped off from the surface of the solid culture medium and treated with caustic potash. By the strong alkali the microbes are not only killed but are also completely disintegrated and dissolved. To the resulting solution, which is of a mucilaginous consistence, acetic acid is added till a white and flocculent precipitate is thrown down which changes on drying to a brown amorphous mass without losing its properties. This precipitate is a nucleo-proteid free from the metabolic products of the plague bacteria and when used for immunisation it is dissolved in a solution of carbonate of soda. It is usually dried in vacuo and can afterwards be kept in sealed bottles and dissolved again in determinate proportions.

The immunising properties of this "vaccine" were fully demonstrated by numerous experiments made in the Pathological Laboratory at Florence and in the Parel Laboratory at Bombay at different times from 1897 to 1900. These experiments were performed on rats, rabbits, guinea-pigs, monkeys, &c. As regards the human subject, it was tried with good results in Florence, in Bombay, and in Australia, applications for it being made by the medical men of several towns of that country on the occurrence of the recent plague epidemics. For the present it is prepared in the Vaccine Institute in Berne under Professor Tavel's direction.

With this "vaccine" it is very easy to obtain a high degree of immunity in the human subject without any of those ill-effects which follow inoculations made with other prophylactics—ill-effects due to the impossibility of standardising the liquid and to the presence of other substances which are pathogenic without being in any way immunising. By our method we isolate the only substance—the nucleo-proteid—by which immunity is produced and nothing but this substance is inoculated in proper doses, well dissolved in water and therefore in the best conditions for rapid absorption. On the contrary, by Professor Calmette's method not only the active nucleo-proteid but other substances composing the bodies of the bacilli are introduced into the organism and their solution and diffusion in the tissues are more difficult and slow.

Therefore if Professor Calmette's claim of having obtained a better "vaccine" than Haffkine's is justified we can claim to have produced the best prophylactic of any since our "vaccine" has not only the advantages shown by Professor Calmette's but also the other ones which have been mentioned above. I am, Sirs, yours faithfully,

Florence, Nov. 30th, 1900. PROFESSOR A. LUSTIG.

KIRKES' PHYSIOLOGY AND AMERICAN PIRACY.

To the Editors of THE LANCET.

SIRS,—Some months ago Mr. John Murray, publisher and proprietor of Kirkes' Physiology, drew attention by letters to the press to the fact that an unauthorised edition of a book bearing the same name was being published and sold in America. It may interest your readers, particularly those who have had to grapple with questions of international copyright, to know that this reprehensible proceeding still continues. In fact, a fresh edition of the unauthorised

[1] THE LANCET, Nov. 10th, p. 1386; Nov. 17th, p. 1454; Nov. 24th, p. 1522.

[2] Deutsche Medicinische Wochenschrift, 1897, Nos. 15-19; Brit. Med. Jour., vol. i., 1897, p. 1027, and No. 2041, 1900.

version has just appeared. In a recent number of the *Boston Medical and Surgical Journal* the following note is appended to reviews of the two rival editions:—

It seems strange to the uninitiated on reading the above reviews to find two books, both called "Kirkes' Handbook of Physiology"; the reader will naturally stop and wonder which is the book. To explain this peculiar anomaly, by giving a short history of "Kirkes' Physiology," this note is written. About the year 1850 Dr. Kirkes, with the aid of the late Sir James Paget, produced in England "Kirkes' Handbook." This book, in vulgar parlance, "filled a long-felt want." It passed through many editions until at last Kirkes died; then, after passing through various minor changes, the editorship of the volume was assumed by Mr. Baker and Dr. Harris, and by them the book was kept up to date, Mr. Murray, the publisher, owning the book. In this country the book was reproduced by Lea Brothers and Co., and by them sold to Messrs. Wm. Wood and Co. (What they sold is a mystery, as they had no rights to sell.) This firm never had permission to use either the late Mr. Baker's or Dr. Harris's name in connexion with their publication. Still the publication and the sale went merrily on. Over four years ago Dr. Harris and Mr. Baker resigned their offices as editors. Mr. Baker is now dead and Professor Halliburton assumed sole control, producing the present English publication or Blakiston's American edition. Although Mr. Baker and Dr. Harris have had no connexion with the book for over four years Messrs. Wm. Wood and Co. still produce a "Kirkes" claimed to be edited by these men and revised for American consumption by Warren Coleman and Dr. Charles L. Dana. In Wood's edition under review several illustrations can be seen (those on blood crystals) which have been lifted bodily from Halliburton's edition and no acknowledgment made. There is also a remarkable similarity between the two editions in parts of the text. Perhaps this may be explained by the theory of telepathy. Of the two editions I understand that Blakiston's is the only edition published in this country with the owner's permission and from which the editor, Professor Halliburton, receives any remuneration. However, the present unfortunate state of international copyright law places no legal obstacles in the way of Messrs. Wood and Co.'s producing the book as they have done, but there is no doubt that fair-minded people will be shocked to find that in the noble profession of medicine men are found who assist in such questionable proceedings, even after personal protests not only from Mr. Murray, the owner, but also from Professor Halliburton. To sum up the whole matter, it simply means that Blakiston's is the authorised edition, while Wood's is not. *O tempora, O mores!!*

This statement is substantially correct. The figures of blood crystals which are specially mentioned as having been "lifted" were in the handbook before I assumed control. But other figures which have been added during my editorship have been pilfered. So that the ethics of the case remain unaltered. The editor of the *Boston Journal* is to be thanked for the determined stand he has made in the matter in the interests of international honesty.

I am, Sirs, yours faithfully,

King's College, London, Dec. 6th, 1900. W. D. HALLIBURTON.

"SUGGESTIONS FOR THE PRACTICAL TREATMENT OF TYPHOID FEVER."

To the Editors of THE LANCET.

SIRS,—In Dr. W. Ewart's interesting paper on the treatment of typhoid fever published in THE LANCET of Dec. 8th he refers to the beneficial effects resulting from the administration of 20 minims of the liquor hydrargyri perchloridi with 15 or 20 minims of the tinctura ferri perchloridi every six hours—a plan recommended some years ago by Mr. W. B. Wedgwood of King's Lynn. Whilst fully endorsing Dr. Ewart's statements I nevertheless think it well to point out that the administration of the perchloride of iron should generally be restricted to those cases of typhoid fever in which diarrhœa is a prominent symptom. If there is a tendency to constipation other remedies may be used more advantageously.

Both the perchloride of mercury and the perchloride of iron act as germicides. That this is the case with mercury is well known. After being absorbed into the system it is afterwards largely eliminated by the mucous membrane of the intestines, both large and small, and so comes in direct contact with diseased surfaces. The perchloride of iron is also a germicide. It readily parts with some of its chlorine and so may be regarded more as a preparation of chlorine than of iron. To show that this is the case it is only necessary, as Professor Binz[1] has pointed out, to add a drop of the tincture or solution of perchloride of iron to a solution of potassium iodide mixed with a little mucilage of starch when a deep blue colour is produced, precisely as if pure chlorine water had been added. Tincture of guaiacum, the well-known test for nascent oxygen, also acquires a blue colour on the addition of a drop of the iron solution. The beneficial effect of the remedy is therefore, in my opinion, due chiefly to the chlorine which it readily gives up, and its action consequently must be exerted chiefly, if not entirely, on the contents of the stomach and duodenum. When there is a tendency to constipation I think that there is some risk after the administration of iron of increasing both the constipation and the pyrexia. In such cases a solution of euchlorine made from potassium chlorate and strong hydrochloric acid may be used as a drink from time to time instead of the perchloride of iron. The administration of euchlorine water, too, is also to be recommended in preference to iron for those individuals (and the number is not small) whose stomachs will not tolerate ordinary doses of the latter remedy.

Furthermore, the question arises whether calomel is not a better remedy in typhoid fever than corrosive sublimate. The former reaches the lower part of the small intestines before it is converted into the latter, and so acts more directly and specially upon the lower part of the ileum, where, as we know, the morbid changes are generally most marked.

In 1893 I discussed in THE LANCET[2] the action, not only of calomel in typhoid fever, but also of other remedies, such as the subnitrate of bismuth, tannic acid, oil of turpentine, &c., all belonging to the germicide class, and to that paper I would refer those who are interested in the subject. As I there pointed out, these are all old remedies—germicide remedies—their use, though empirical, suggested and adopted as a result of the keen clinical observation and experience of the physicians of a bygone age. The scientific investigations of the present day are only teaching us now how to employ these remedies with greater precision.

I am, Sirs, yours faithfully,

P. W. LATHAM,
Consulting Physician to Addenbrooke's Hospital,
Cambridge, Dec. 8th, 1900. Cambridge.

[1] Binz's Pharmacology: Sydenham Society's Translation, vol. ii., p. 46.

"THE TREATMENT OF SPRAINS AND OF SOME FRACTURES."

To the Editors of THE LANCET.

SIRS,—The address by Mr. Tubby on this subject is of much interest. As you have on two former occasions[1] been good enough to insert in THE LANCET communications by me relating to the treatment of recent sprains and dislocations by movement I would ask your permission to recur to the subject. After a pretty extensive experience of treatment by pressure by cotton-wool and bandage and also by strapping, especially at the time when Mr. Cotterill first published his book, which at present I am sorry I cannot lay hands on, I have a very decided preference for the movement treatment. Mr. Tubby says that there are two methods of treatment, one of which is by "rapid forcible movement immediately after a sprain." Then again, he says, referring to the treatment by mobility from the first: "It is one which can only be employed in very slight cases and even then with some misgiving, for in certain patients the symptoms instead of rapidly clearing away become more pronounced and permanent thickening and disability of the joint remain."

Is it necessary to use rapid forcible movement? My opinion is that forcible movement is generally employed (as a rule successfully) by the bone-setter after a patient has been under treatment by immobility for some time. A recently sprained joint is extremely painful and has at first to be handled very tenderly. Only very slight friction and squeezing can be borne. As the pressure is gradually increased the patient is encouraged to move his joint till flexion and extension are as complete as possible. No force is used. In the case of the ankle on attempting to walk the expression of surprise on the patient's face denotes that there is a considerable difference in the state of his joint. I am not speaking from the experience of a few cases, for I have employed movement in the treatment of recent sprains and dislocations for a good many years. I have used it for sprains of every degree of severity. Impairment of the usefulness of a joint may remain after a sprain, no matter what kind of treatment has been employed. I cannot remember

[2] Some Remarks on the Pathology and Treatment of Typhoid Fever, by P. W. Latham, M.D. Cantab., F.R.C.P. Lond., and Arthur C. Latham, B.A., Balliol College, Oxford, THE LANCET, March 4th and 11th, 1893.

[1] THE LANCET, Feb. 2nd, 1898 (p. 465), and June 16th, 1900 (p. 1756).

any occasion in which I have regretted treating a sprained joint by movement instead of by any other method.

I am, Sirs, yours faithfully,

Galashiels, N.B., Dec. 8th, 1900. WILLIAM DOIG, M.D. Edin.

"SOME NOTES ON CASES OF MOVEABLE KIDNEY."

To the Editors of THE LANCET.

SIRS,—In an article under the above heading by Dr. H. Davy, in THE LANCET of Dec. 1st last, occurs the following statement: "Shortly after complete obstruction supervened and it was thought advisable, after consultation with Mr. A. J. Cumming, to perform lumbar colotomy. Mr. Harris performed colotomy in the ordinary way and he performed a most difficult operation extremely well, for he found the colon *completely empty*, and it is a matter of some difficulty to perform colotomy on an *empty* colon. Within a week the patient died," &c. The italics are mine. It would be of interest to hear what benefit was expected from this remarkable procedure. I am, Sirs, yours faithfully,

C. HAMILTON WHITEFORD.

Sussex-terrace, Plymouth, Dec. 8th, 1900.

"ARTHRITIS AND APPENDICITIS."

To the Editors of THE LANCET.

SIRS,—As a contribution to the discussion on the occurrence of arthritis in cases of appendicitis, reported in THE LANCET of Oct. 27th, p. 1203, may I recall the fact that French writers have often described arthritis as a complication of dysentery and in the discussion at the Medical Society of London Mr. F. C. Wallis referred to cases in connexion with ulceration of the bowel? This complication of dysentery appears to be very rare in India, but to judge by the amount of space devoted to it in French books on tropical diseases it must be more common in the dysentery of temperate climates. In his recent book, "Maladies des Pays Chauds," M. Brault devoted no less than ten pages to the discussion of what he calls "le pseudo-rhumatisme infectieux dysentérique," whereas the complication is not mentioned in Manson's "Tropical Diseases." It is certainly very rare, but I have recently met with one case in which on the third day the bowel symptoms suddenly ceased and well-marked arthritis of both knee-joints took their place.

I am, Sirs, yours faithfully,

W. J. BUCHANAN, M.B. Dub.,

Bhagalpur, Bengal, Nov 20th, 1900. Major I.M.S.

THE USE OF COPPER FOR ELECTRODES.

To the Editors of THE LANCET.

SIRS,—I notice that in the last edition of Dr. Lewis Jones's work on "Medical" Electricity, as in most of the textbooks on the subject previously published, the electrodes to be employed in giving various kinds of electric baths are recommended to be made of copper. Now electrodes made of this metal rapidly discolour and corrode under the influence of the products of electrolytic decomposition of whatever fluid is used for the bath, and consequently are troublesome in use. I have been using for the last two years electrodes of thin sheet aluminium and find them practically untarnishable in the solutions usually employed and in every way much more suitable. In the case of aluminium the terminals should be clamped on, as soldering the metal is difficult and unsatisfactory. Possibly the hint may be of use to those of your readers who use electric baths in their practice.—I am, Sirs, yours faithfully,

RICHARD J. COWEN, L.R.C.P. Irel., &c.

Clarges-street, Mayfair, W., Dec. 11th, 1900.

"OUR WIDOWS AND ORPHANS."

To the Editors of THE LANCET.

SIRS,—I have read the letters of Mr. Heath and Dr. Cullingworth in THE LANCET of Nov. 17th (p. 1459) and Dec. 1st (p. 1610) respectively, pointing out the advantages of joining the Society for the Relief of Widows and Orphans of Medical Men.

May I ask, through the medium of your columns, whether the scope of the society cannot be extended so as to include subscribers practising in any part of England? I do not know of any other society doing similar work, yet the benefits offered by the society are open only to those practitioners who join while they are living within the radius of 20 miles from Charing Cross.

There must be a large number of men who, like myself, never heard of the society when they were in London, and would now very gladly subscribe. Cannot something be done for us? I am Sirs, yours faithfully,

Dec. 3rd, 1900. A COUNTRY DOCTOR.

To the Editors of THE LANCET.

SIRS,—Thank you for your note *in re* medical charities, but let me have my growl. I have never been asked for a subscription until now for Epsom College and have often wondered how the institution was financed. As to the British Medical Benevolent Fund, I never heard of it before. How many practitioners are similarly placed? Why not present to every man an appeal when he receives his certicate of registration?

I am, Sirs, yours faithfully,

Dec. 8th, 1900. A.K.C. LOND.

NOTES FROM INDIA.

(FROM OUR SPECIAL CORRESPONDENT.)

Great Rise in Plague Mortality.—The Famine.—Decoration of Bombay Plague Nurses.

I HAVE to record for the week ending Nov. 18th a great rise in the mortality from plague throughout India, largely due to the recrudescence of the epidemic in Bengal. The deaths were 2963, a rise of 776 on the previous seven days. In Bengal the deaths were 583, a rise of 242. The death-roll is increasing in all the affected districts which are Gaya, Saran, Patna, and Monghyr. For the corresponding week of last year the deaths from plague throughout India were 2968, so that the general condition of things can hardly be said to have improved. The Mysore State is still suffering heavily and records 932 deaths, as against the previous return of 831. There is a decided decrease in the Bombay Presidency as well as in Bombay city. Information has just been published from Lahore of an outbreak of a very virulent type of plague at Darnam in Gurdaspur district. It is said that the death-rate in Hissar is appalling and the people are all seriously debilitated from the prolonged famine. Plague is rapidly going down in Poona. Both the cities of Calcutta and Bombay continue to return very high death-rates. For the past weeks of November the rate in Calcutta has been about 45 per 1000 per annum—the average being only 35. For the same period in Bombay it has been about 47·5 per 1000. In both cases also there is no satisfactory explanation given of the increases. In Calcutta cholera and small-pox are only about the average, but there is an increase under fevers and bowel complaints and especially under "all other diseases." Plague deaths are now merely nominal. In Bombay much of the increase seems to be recorded under phthisis and diseases of the respiratory organs. Large numbers of people from the famine districts have immigrated to Bombay and it has been found necessary to convert the old Grant-road Plague Hospital into a sort of workhouse infirmary where Mrs. Adams Wylie is distinguishing herself in nursing and charitable work.

The numbers under famine relief will soon cease to be published, as the decrease during the past week has been nearly 250 000 and at the present time the total under relief is only 554,787. The Bombay Presidency and the Central Provinces continue to be the chief districts afflicted, but the Baroda State and some of the Bombay native states still record large numbers.

Even after a considerable lapse of time it is pleasing to note the recognition of services of some of the plague nurses during the earlier periods of the epidemic. A presentation lately took place in Bombay by Lady Northcote to three nurses who have especially distinguished themselves in connexion with plague work in the city. Nurse Leavers, Nurse Remy, and Sister Mary Edith have been made Honorary Nursing Sisters of the Order of St. John of Jerusalem and the presentation of the badges and diplomas were formally made to them. It must not be forgotten that there are at least a dozen others who have worked equally

well and arduously. Many of these were mentioned by name at the public meeting, but honours and decorations can only fall to a few.

Nov. 22nd.

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

University of Birmingham.

THE Principal of the University, Dr. Oliver Lodge, delivered an address to the students on Nov. 28th on the Aims and Hopes before them in the new University. There was a crowded audience, the chair being taken by the Vice-Chancellor, Alderman Beale. This was the first public occasion on which the University assembled as such, and much interest was exhibited in the proceedings. Defining the term "university," the Principal spoke of it not as a building, but as a society—an assemblage of students combined together for mutual help and coöperation. "Unity of aim and diversity of method" was the keynote of valuable and forcibly expressed statements as to "the production of strong and useful citizens to go out to the furthest limits of the great English-speaking commonwealth" in different capacities and there to serve their kindred and their race in a hundred different ways. A students' council was suggested and the social and recreative side of the student's career was emphasised. Many important suggestions were made in the course of the address which was illustrated by appropriate similes and humorous allusions. High ideals and lofty aims were set before the students as part of the thoroughness which ought to characterise their efforts. In language gracefully expressed, yet in dignified terms, the Principal sketched the aspirations of a great university and foretold the vast influence for good such an institution would bring to bear upon the community at large. The address was listened to with much interest and unanimous opinions were expressed as to its excellence and power. Already the effect of some suggestions made has been witnessed to by the appointment of student representatives on the council of the University.

Some Criticisms.

But already some rifts have appeared in the lute, though of somewhat unimportant character. The University has had a seal made which is intended to embody certain traditions in its symbolic features. Among others the derivation of the name of the city of Birmingham is represented by sprays of "broom" around the margin of the seal. This, competent critics declare, is entirely an error and that the word "Bromwicham" or "Bromicham" dates from the seventeenth century only, whereas the town existed long before. If this derivation was really the true one there would be some justification for the appellation of "Brummagem." History shows that we are influenced much by phrases, and if the unreal enters as an element into these heraldic bearings some obloquy may be associated with the place itself. Again, complaints have been made that the fees of the University as charged to students are too high. There is no ground whatever for this allegation. They are calculated at about the same rate as—or even lower if anything than—the English university colleges and are not intended to compare with Scotch universities where the Government grants and conditions are entirely different.

The Consultative Medical and Surgical Institution.

In consideration of the finding of the General Medical Council the authorities of this institution have agreed to withdraw and as far as possible to recall all advertisements relating to the medical aspect of its constitution. This resolve was the subject of a communication to the Council during the recent sitting, but that body wisely determined not to entertain it as their judgment is not to be pronounced until next May. In the meantime much controversy and some bitterness are being shown concerning the methods of those who promote the cause. The epithet of "street doctor" applied by the leading spirit of the movement is an uncalled-for and unnecessary term, which has provoked much rancour and recrimination. The institution may fairly be allowed to stand or fall upon its own merits. The opinion of the profession being expressed in clear and unmistakable terms it is confidently expected that the misjudged "philanthropy" which started it will meet with its decline and fall in due time.

The Dental Hospital.

The forty-first annual meeting of the subscribers and friends of the Dental Hospital was held on Dec. 7th. The report showed a balance of £493, of which £450 would be reserved for building at the expiration of the lease. The mechanical department showed that the supplying of artificial teeth would prove one of the most important parts of the future work. The necessity of building a new hospital was conclusively demonstrated. In 1900 there were 27,273 cases, including 15,669 extractions, while the value of the work had increased tenfold. It was estimated that a new building would cost £10,000, while £5000 would be required to fit it up Some allusion was made to the influence of the new water-supply upon the teeth. Various votes of thanks were then passed.

Birmingham Musical Festival.

On Dec. 7th the Board of Management of the General Hospital received a cheque for £6009 6*s.* 7*d.* from the Orchestral Committee of the late Musical Festival, being the profits from this year's performances. On three previous occasions only has this amount been exceeded—namely, in 1870, 1873, and 1876.

Dec. 11th.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

Manchester Chemists and Arsenical Beer.

AT the meeting of the Manchester Section of the Society of Chemical Industry on Dec. 7th some conversation took place on the subject of beer-poisoning. The chairman (Mr. H. Grimshaw) said that though they had heard so much on the subject there was little that was definite. Mr. J. Carter Bell had found that many of the processes for detecting arsenic which he had tried did not work satisfactorily. He had not come across any sample of beer "loaded," as had been said, with arsenic, but he had returned the quantity found in a bad sample as "0·2 of a grain calculated as arsenious acid in one gallon of beer," so that 100 gallons of beer would contain about two grains of arsenic. He added that the Marsh test had not proved trustworthy in showing minute traces of arsenic in beer, which as ancient history was interesting. Mr. Duncan stated that he had often had to test for arsenic and he had found in beer one-tenth of a grain to the pint. This was outside Manchester and before anything had appeared in the papers. He was asked to look for lead, antimony, and tin, which he did not find, but tested for arsenic, which he did find. Dr. Gerland spoke of the difficulty in using the Marsh test caused by the presence of organic matter. Mr. F. Scudder considered that in testing for arsenic in beer at least a litre should be used. He thought that it was important to ascertain the toxic effect of arsenic when combined with alcohol. "It was" said to be "in some cases customary for a man to drink two gallons of beer, and it might be that while 0 04 of a grain of arsenic would not of itself produce ill-effects it might when combined with alcohol have a particular therapeutic effect." As was to be anticipated, the epidemic of arsenical poisoning—or to put it differently, of peripheral neuritis associated with the drinking of beer—has been widespread, but as the authorities are on the *qui vive* and the public have been abundantly warned it may now gradually subside. There seems to be a general hope that this lamentable visitation may lead to the use of malt and hops again, free from the intrusion of "substitutes."

The Manchester Corporation and Beer-poisoning.

It was officially announced yesterday by the Sanitary Committee of the Manchester Corporation that the brewers and retailers of certain beer in samples of which the city analyst has found arsenious acid are to be prosecuted. Dr. J. Niven, the medical officer of health of Manchester, has written to the honorary secretary of the Confectioners' Association stating that in three samples of glucose, two used in making cheap sweets and one used in making jams, no trace of arsenic was found.

Manchester Volunteer Medical Staff Corps.

A further appeal for funds is being made by the Volunteer Medical Staff Corps of Manchester to enable them to provide

suitable headquarters and drill accommodation. A first subscription list is being prepared which is headed by Honorary Surgeon-Colonel Walter Whitehead with £100. The sum required will not be less than £12,000. Each company consists of four officers, three of whom must be qualified surgeons, and 100 men. The latter are drawn from all classes. The artisan, the clerk, the labourer, the warehouseman, the railway porter, the student, may all be found in the ranks. They are trained in drill, nursing, physical exercises, "first aid," and in the safe and easy transport of the sick and wounded on stretchers, on band seats, in wagons, cacolets, railway trains, &c.; further, as the men have to drive the ambulance wagons, some are trained in riding and driving and in the care and management of horses. Almost nightly work is done in Manchester and the corps goes for training every year alternately to Aldershot and to the hospital at Netley. The strength of the corps equals that of the London corps, which speaks much for the zeal and activity of Manchester and the district, but it suffers from want of adequate and proper quarters. This body of men is fitted for useful work in peace or war, for in cases of accident their training must make them the most skilful and best disciplined helpers, and in case of threatened or actual invasion they would be prepared to do their duty to the full, as witness the work done by volunteers from the corps in South Africa. Even if the wave of self-sacrificing patriotism is less evident than when it first arose, the £12,000 asked for will be well spent if considered as part of the insurance premium which our country must pay for the blessings of peace. Manchester will not act up to its reputation if this appeal does not meet with a generous response.

The Ancoats Hospital.

At the annual meeting of the friends and supporters of the above hospital it was stated that an offer of £10,000 had recently been made by an anonymous donor to the hospital for the purpose of providing a convalescent home. The committee hope soon to be able to provide a comfortable home for 12 men and 12 women. A site has not yet been secured, and Mr. E. S. Heywood, chairman of the Manchester Royal Infirmary Board, advised the committee not to be in too great a hurry in deciding on a site, and "to select for the convalescent home a place where there was a little life, and, consequently, something going on that would prevent the patients from feeling dull." This advice is no doubt sound, for among the class from which the patients come there are few who would not soon feel bored by the peaceful quiet of even the most beautiful park-like scenery if it were unenlivened by human interest.

Charitable Bequests.

Under the will of the late Mr. F. Rothwell, a Manchester brewer, a sum of £24,000 has already been distributed to various public institutions and a further sum of £14,999 has been paid into the Chancery Court of Lancashire to be distributed according to a scheme approved by the court, and of this about half goes to Manchester and Salford charities, the various medical charities benefiting to the amount of £3200.

Dec. 12th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

The Royal Society of Edinburgh.

AT the monthly meeting of the Royal Society of Edinburgh, held on Dec. 3rd, Dr. Richard J. A. Berry, Edinburgh, read a paper on the True Cæcal Apex, or the Vermiform Appendix, its Minute and Comparative Anatomy. The lecture was illustrated by lantern slides. Little had hitherto been done, the lecturer said, in the investigation of the comparative anatomy of the vermiform appendix. In his own investigations on this subject he had used three types of animals—the rabbit, the cat, and the pigeon. He found that in the majority of animals examined the lymphoid tissue in the cæcum was largely in excess of that contained in other parts of the large intestine. The line of demarcation between the two was in many instances, such as the pigeon, the rabbit, the cat, the mouse, the rat, the dog, and the striped hyæna, most sharply marked. The cæcum was thus in warm-blooded animals and the higher vertebrates a special seat of lymphoid tissue. Furthermore, the vermiform appendix in man represented the true apex of the cæcum. It was further proved beyond all doubt that the characteristic feature of the normal human appendix was lymphoid tissue. All those facts led to the conclusion that the homologue of the vermiform appendix in animals was the cæcum. He had shown in his work on the subject that in animals the seat of the lymphoid tissue in the cæcum varied considerably. In the pigeon it occupied the entire cæcal wall, in the mouse and rat the lateral wall of the cæcum near its apex, while in most animals it was found to be collected at the apex of the cæcum. Assuming the view to be correct that the lymphoid tissue tended to be collected into a specially differentiated portion of the cæcum, it might be expected from a knowledge of the laws of evolution that occasionally an appendix would be found in some of the lower animals. This was actually the case in two of the lower animals, the wombat and the capybara. His conclusions were: (1) that lymphoid tissue was the characteristic feature of the cæcal apex (the vermiform appendix of man was therefore represented in the vertebrate kingdom by a mass of lymphoid tissue situated usually at the cæcal apex); (2) that as the vertebrate scale ascended this lymphoid tissue tended to be collected together into a specially differentiated part of the intestinal canal—the vermiform appendix; and (3) that the vermiform appendix was therefore not a vestigial structure, but a specialised part of the alimentary canal.

Professor Chiene on his South African Experiences.

On Saturday, Dec. 1st, Professor John Chiene delivered a lecture to the members of the Edinburgh University Union on the views and impressions which he had formed during his stay in South Africa. He gave an outline of his journeys in Cape Colony, Natal, the Orange River Colony, and the Transvaal, and then described the various hospitals which he visited as consulting surgeon. He had been able to do a good deal for the wounded at Mafeking, having arrived there just two days after the relief of the town. He described the Edinburgh Hospital at Norval's Pont. He hoped it would long remain a hospital at this or some other important point on a main line of railway, and that many of our soldiers would get much benefit in time to come within its walls. Everywhere he went he met old students of Edinburgh University, from whom he had received the greatest kindness. It was an interesting fact that three of the hospital trains at the front were in charge of Edinburgh men. In the course of his journeys he had met Dr. Pretorius, with whom he had a conversation. He had never come in contact with any British soldier who had been under the charge of the Boer doctors who had not expressed to him gratitude for the kindness they had received at their hands. Professor Chiene spoke highly of the various hospital trains. On his way home he visited St. Helena and met there some of his Boer friends whom he had seen at Mafeking. He had been glad to help them at Mafeking and they were equally glad to see him at St. Helena, where he found them looking well and as if well fed. He had there become acquainted with Cronje and his wife. Cronje had spoken to him of all the kindness he had received at the hands of the British.

The Health of Edinburgh.

The report of Sir Henry Littlejohn on the health of Edinburgh in October was submitted to the Public Health Committee of the town council on Nov. 27th. The report showed that on that date there were 320 patients in the City Hospital for Infectious Diseases. Of these 43 were cases of diphtheria, 25 of typhoid fever, 147 of scarlet fever, and 81 of measles. These figures show that there is a large increase in the number of cases of diphtheria, there being usually only 14 or 15 cases of that disease in the City Hospital. There did not appear to be any definite source of infection.

Glasgow University Club, London.

The members of this club dined together on the evening of Dec. 5th, at the Café Royal, Professor Sir Hector C. Cameron, M.D., being in the chair. There was a large attendance, and among others the chairman has supported by Lord Lister, Sir J. W. Batty Tuke, M.P., Sir W. T. Gairdner, K.C.B., Surgeon-General Jameson, C.B. (Director-General of the Army Medical Service), Major Babtie, V.C., C.M.G., and Dr. W. Bruce. The toast of "The Queen" having been duly honoured, the chairman proposed "The Club" and in so doing referred to the extensive scheme for the provision and extension of laboratory accommodation upon which the University authorities in Glasgow are at

present engaged. The financial aspect of this scheme was necessarily a somewhat anxious one, but it could not be doubted that the money required would be forthcoming. In 1901 the University would celebrate its ninth jubilee, and the occasion was to be marked by an elaborate series of academic ceremonies, and he hoped also by substantial additions to the University resources. The next toast, submitted by Surgeon-General Jameson, was "The Health of Major Babtie, V.C., C.M.G.," who is a graduate of Glasgow University and who gained the Victoria Cross at the battle of Colenso for his heroism in going forward under a heavy fire to attend to the wounded and to succour the late Lieutenant Roberts, V.C. Sir William Gairdner spoke a few words in support of the toast, which was drunk with Highland honours. It was announced that Major Babtie had been elected an honorary member of the club. The other toasts included "The Guests," proposed by Mr. James Campbell, M.P., to which Sir J. Batty Tuke replied, and "The Chairman," proposed by Lord Lister, who made some interesting references to his association with Sir Hector Cameron in the Glasgow Royal Infirmary where the early developments of the antiseptic system first took practical form. The dinner was marked by much enthusiasm and was, in every sense, a conspicuous success.

An Important "Skim Milk" Case at Glasgow.

Decison has just been given in an important test case, in which, under the Food and Drugs Act, at the instance of the corporation, a dairyman was charged with having sold as "skim milk" milk which was deficient in fat or cream to the extent of 0·72 per cent. Evidence had been given by experts from Glasgow, Edinburgh, and London, and by many prominent farmers, dairymen, and sanitary officials. The milk in the case in question had not been skimmed by hand but had been "separated" by mechanical means till only 0·28 per cent. of fat remained in it, and the question came to be simply whether such milk could properly be sold under the name "skim milk" or whether it ought not to be labeled distinctively as "separated milk." It was not a question of adulteration, but of the extent to which fat may be removed from milk. The prosecution drew the line arbitrarily at 1 per cent. of fat and held that unless at least this percentage is left the milk is not of the "nature, substance, and quality" of the article demanded by a purchaser who asks for skim milk. The respondent refused to accept this 1 per cent. standard, or any other standard, and boldly claimed the right to remove the entire fat if he could and still to sell it as skim milk. It was common ground among the witnesses that milk is still milk though all its fat be removed, so that its nature is not changed; it was also commonly admitted that, apart from its fat, milk contains other valuable food constituents which are not affected by the mechanical removal of the fat. The sheriff put aside the argument as to danger to infant life from the use of such milk, as even the 1 per cent. standard insisted on by the prosecution fell very far short of the proportion of fat requisite for a child fed on milk alone. Further, the Acts did not profess to regulate diet or to prescribe the proper food for infants and did not condemn any article which was good for food merely because if wrongly used it might be injurious to health. The Acts only held a retailer to be in default if he sold an article which was not what he represented it to be. It was held now that the machine skimmer did not alter the nature, substance, or quality of the milk and was therefore not struck at by the Acts, and this view was strengthened by the fact that the machine did not necessarily remove the fat to a greater extent than did hand skimming, or it might be regulated so as to remove a greater or smaller proportion. The amount removed by hand depended on the length of time during which the milk had stood and the deftness of the skimmer, and even hand-skimmed milk might contain less than 1 per cent. of fat. Somerset House authorities had therefore so far refrained from drawing a hard-and-fast line. Sheriff Fyfe went further, being evidently inclined to the view that the increased degree to which the fat was removed was compensated for by the freshness and cleanliness of the machine-skimmed milk. Such milk was not usually allowed to stand for varying lengths of time in shallow dishes, but was at once treated and the centrifugal force employed seemed to be calculated to separate all possible impurities (bacterial and others) from both milk and cream. [The sheriff might also have stated that milk is usually sterilised before being treated in the separator.] In the absence of a standard of fat for "skim milk" the decision went against the prosecution—"the article of commerce known as skim milk equally answers that description whether the fat in it is 2 per cent., or 1 per cent., or nothing." The learned sheriff's decision is doubtless right enough as an interpretation of existing law on the subject, but it makes clear the necessity for compulsory distinctive labels, as "milk," "skimmed milk," and "separated milk," and the formulation of a definite standard for each. Milk from which *all* the fat has been removed is properly a fluid prepared from milk, "milk" it is not.

Aberdeen Royal Infirmary.

It is announced that a munificent donation of £25,000 will be received by this infirmary from Lord Mount-Stephen.

Dec. 11th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Sir William Thomson.

AT the request of the Lord Lieutenant of Ireland Sir William Thomson has consented to retain during the remainder of His Excellency's period of office in Ireland his position as surgeon-in-ordinary to the household, the resignation of which he had placed in the Lord Lieutenant's hands on receiving the appointment of surgeon-in-ordinary to the Queen in Ireland.

Address and Presentation to Dr. Magennis.

Dr. Edward Magennis was the recipient of an address and presentation from the representative inhabitants of the town of Lurgan and the surrounding districts on Dec. 5th, on the occasion of his giving up the large practice which he had enjoyed there for 20 years and changing his residence to Dublin. Dr. Magennis has filled many important positions in Lurgan and the county Armagh. He is a justice of the peace of the counties of Armagh and Down. He graduated in the Royal University in 1884 and is a Licentiate of the Royal College of Physicians and the Royal College of Surgeons of Edinburgh.

The Nursing Question in Armagh Union.

At the weekly meeting of the Armagh Guardians on Nov. 27th an important discussion took place on the nursing question. Some months ago the guardians selected as assistant in the infirmary a probationer nurse, an appointment which the Local Government Board refused to sanction, and three months afterwards the guardians were forced to dismiss her as the Local Government Board refused to sanction the appointment. The same central authorities in Dublin wrote to the master and medical officer stating that they would hold them responsible for the proper nursing of the sick in the infirmary and referring them to the nursing order of September, 1897, where, acting under the requisition of the medical officer, the master was bound to appoint a qualified nurse until the next meeting of the board. The medical officer of the infirmary having requisitioned the master he procured the services of a trained nurse as assistant in the infirmary, and the matter coming before the board of guardians at their next meeting they unanimously refused to sanction the appointment or to have anything to say to it, and by their direction their solicitor was told to take the advice of The MacDermott, Q.C., on the following questions. Whether the Local Government Board were acting within their powers when they authorised one officer of the union, the master, to employ another officer, the temporary nurse. If counsel was of opinion that the Local Government Board were acting within their powers in so doing the guardians desired to be advised whether the master was authorised to continue the services of the nurse from week to week contrary to the wishes of the guardians expressed in their resolution; whether the guardians were liable to pay all or any part of the remuneration due for the services of the assistant nurse appointed; and whether, under all the circumstances of the case, the guardians were compelled to appoint a permanent assistant trained nurse, or whether the guardians had complied with all lawful requirements when they appointed a probationer nurse, which appointment the Local Government Board refused to sanction. The MacDermott advises the guardians to contest the case and gives his opinion that the guardians were correct in their action. He recommends that a notice be served on the assistant nurse disaffirming her being, or having been, one of their officers, and

informing her that no payment will be made to her by the guardians, a communication to the same effect being made in respectful terms to the Local Government Board. The MacDermott says that the mode in which the question can be raised is by refusing payment, just as in the case of the temporary medical substitute recently decided by the Queen's Bench in Ireland adversely to the Local Government Board. It was unanimously decided by the guardians that their solicitor should be instructed to carry out all the recommendations of The MacDermott, Q.C. The next move must be made by the Local Government Board. The guardians are determined to fight.

The Belfast Medical Students' Association.

The inaugural meeting of the Medical Students' Association of Belfast was held on Nov. 30th, in the McMordie Hall of the Students' Union. There was a large attendance. The President, Mr. Walter Phillips, B.A., medical student, delivered an address in which he traced in a very literary way the relationship of magic, alchemy, and astrology to medicine. Afterwards Dr. J. A. Craig, demonstrator of anatomy, read a paper on Some Impressions of the Vienna Medical School, in which he gave an account of a visit to the school. The President of Queen's College, Dr. H. O'Neill, Professor T. Sinclair, Professor R. O. Cunningham, and Professor J. A. Lindsay subsequently addressed the meeting.

The Bacterial Purification of the Drainage of Belfast.

The corporation of Belfast have very wisely decided to obtain further advice as to the proposed scheme of purifying the Belfast drainage by bacteria beds, and they have appointed Professor G. A. Letts, D Sc. professor of chemistry, Queen's College, Belfast, and Dr. J. Lorrain Smith, lecturer on pathology in Queen's College, Belfast, as experts to examine and report, at as early a date as practicable, on the scheme for purifying the main drainage and on its effect on the Belfast Lough. They are to be paid 150 guineas each. This course of action is the one which was recommended in THE LANCET of Sept. 22nd, 1900, p. 909.

Health of Belfast.

From the report presented to the city council at their monthly meeting on Dec. 1st it appears that between Oct. 21st and Nov. 17th, 1900, there were 334 cases of zymotic disease notified, the largest number being 127 cases of typhoid fever. 48 deaths from zymotic disease occurred. The annual death-rate from all causes was 18·5 per 1000, which is lower than is usual at this season of the year. Scarlet fever of a mild type seems to be prevalent. In the discussion which followed the presentation of the report some scepticism was expressed as to the working of the Notification of Diseases Act, it being stated that medical men in better-class practices evaded the law in not reporting cases and that the same case was reported by several medical men. I doubt these charges; but if they are true it only shows what inadequate measures are taken by the public health officials to see that the law is properly carried out.

Extraordinary Rainfall in November.

November has been in Ulster a very wet month, the rainfall reaching 6·06 inches, being 1·65 inches more than in the corresponding month of last year. 1·50 inches more rain have fallen in the 11 months of this year than fell in the corresponding period of 1899, this being due almost entirely to the excess of the amount in last month. Only 11 days in November passed without rain, and in one—Nov. 24th—the amount of rain as measured was actually 1·40 inches.

Dec. 1 th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

The Drinking-water Question.

THE "water lords" have at length been moved by the protestations of the public and the press against the half-rations system of the supply of spring water at certain times in the year. Their works committee has brought forward a plan which will cost 300,000,000 francs, but which will for a long time, at least, do away with any fear of a water famine. The first part of the scheme consists in as soon as possible utilising certain head waters of the Avre which belong to the city and are at present used for nothing. The existing main which carries water from the Avre is of quite sufficient diameter to carry the additional supply. The second part of the scheme consists in making use of water from the Val d'Orléans, which practically means the taking up of the sources of the Loiret, for it is intended to make use of the subterranean springs in that district. The city of Orleans, however, and all the towns which are carrying on a campaign in favour of making the Loire navigable, are up in arms against this proposal, but the engineers hope to overcome opposition by the promise that the water taken shall be given back by means of storage basins. They hoped, too, that the Soissons greensand would be found to yield water enough to assist very considerably in supplying Paris, but the results of borings have not come up to expectation. Before undertaking these expensive works, which will necessitate, as before mentioned, an expenditure of 300 000,000 francs, it would be as well to notice exactly what are the present conditions existing in the city of Paris and to consider whether this new and costly source of supply is necessary or whether that supply which the Parisians already have could not be better distributed, due precautions being taken to avoid contamination. The estimated consumption in Paris averages 230 litres per head per diem but in times of drought this amount is very possibly reduced to 150 litres, which is all the same quite sufficient. The scarcity of water is in great part due to the shameful waste of water which occurs in the cooling of "drinks." It takes about 200 litres of water to cool two bottles of water and one bottle of wine. There must also be taken into consideration the idiotic custom of the authorities in making use of spring water for flushing water-closets and working lifts. The best remedy would be to supply houses with river water for such purposes, but for this end pumps would have to be erected which would supply the water at sufficient pressure and the requisite piping would cost about 80,000,000 francs. The next remedy would be that every water consumer should use a meter. He would thus only pay for what he consumed and waste would be avoided, and he would no longer cool his wine with water which he would find to cost about six times as much as the ice necessary for the same end. The establishment of meters would cost the city about 40,000,000 francs, and therefore the carrying out of these two schemes would only cost 120,000,000 francs, as against the 300 000,000 francs which the taking up of new gathering grounds would cost. In any case the watching committee of the Paris drinking water-supply, after considering the report of M. Duclaux, Director of the Pasteur Institute, came to the conclusion that certain measures should be taken to avoid contamination of the sources of supply already in use. These measures are as follows. 1. Careful examination of the borings at the springs save in the case of those of the Loing, where they have been carried out in the most modern style and with every precaution. 2. A protection zone for the gathering ground which shall be in some cases at least 100 square kilometres in area. Special medical surveillance is to be exercised within this area and in case of the notification of a case of typhoid fever within this area special measures of disinfection shall be taken as regards every sick person. 3. General prophylactic measures such as disinfection of communal gutters and gullies situated within the protected zone and care to be taken that infected waters do not by earth filtration mingle with the springs. These rules are of course to apply to any new source of supply which may be hereafter taken up as well as to those at present in use. The committee has in hand the question of the admixture of water from different springs and that of the admixture of spring with filtered river water.

Obituary.

The death is announced, at the age of 83 years, of Dr. Jules-Etienne Bergeron, permanent secretary of the Academy of Medicine and Vice-President of the Consulting Committee of Hygiene. Dr. Bergeron was born at Moret in the Department of Seine et Marne in 1817. In 1852 he was nominated, after public competition, as physician to the hospitals and commenced his career at the Rochefoucauld Hospital. He also served at the St. Antoine and the Trousseau Hospital. Dr. Bergeron made a great name for himself in the treatment of children and in 1865 he became a member of the Academy of Medicine. He had held the post of Vice-President of the Consulting Committee of Hygiene since 1834 and had been permanent secretary of the Academy since 1887. Dr. Bergeron has left a number of works dealing with rabies, with tinea, and with the diseases

of children, and a very elaborate treatise upon the Repression of Alcoholism, which last was published in 1872. He was *Officier* of the Legion of Honour.

Dec. 11th.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

Professor Koch on Malaria.

AFTER a long absence Professor Koch has now returned home, his investigations of malaria being for the present terminated. Following his practice in the case of his first reports which have been already referred to in these columns[1] he has published a final account in the *Deutsche Medicinische Wochenschrift*. His last researches were carried out in the Caroline and Marianne islands where he stopped while proceeding homewards by way of New Guinea and Hong-Kong. As I have already mentioned, Professor Koch insists on the necessity of examining the blood of children in places where the adult population is free from malaria, this being the only way of obtaining reliable results. He, therefore, in Ponape and Saipan examined 79 and 24 children respectively, the result being that neither enlargements of the spleen nor parasites in the blood were detected. Both islands were in fact free from malaria. In both islands he found a great many cases of frambœsia, a disease also termed "yaws" by English medical men. This disease being very little known and therefore often confounded with syphilis Professor Koch suggests that the Colonial Department should send a specialist for diseases of the skin to these islands. From Hong-Kong Professor Koch proceeded to Egypt to make himself acquainted with the contradictory opinions regarding malaria held in that country. He found several cases of malaria in Alexandria and foci of endemic malaria at Heluan, near Cairo, and at Wadi Natrun, situated in the desert in the west of the Nile Delta. In order to include the facts relating to malaria in Germany Professor Koch requested Professor Frosch of the Institution for Tropical Diseases to examine some of the places where the disease had formerly been endemic—as, for instance, on the coast of the North Sea in Schleswig-Holstein. According to the report of this gentleman the disease is rapidly decreasing in Germany, and only a few isolated cases, but no focus, could be detected.

Bactericidal Action of the Ultra-violet Rays of the Spectrum.

In a preliminary communication to the *Deutsche Medicinische Wochenschrift* Dr. Strebel of Munich announces that he has succeeded in ascertaining that certain invisible rays produced by a powerful induction coil are able to kill bacteria. Micrococcus prodigiosus, for instance, is destroyed by these rays in 20 minutes even when thick screens of quartz are interposed. The spark of the induction coil is in any case rich in ultra-violet rays, and by using certain substances as electrodes and a Leyden jar as regulator and accumulator of the electricity the amount of ultra-violet light is considerably increased. Dr. Strebel used aluminium and cadmium as electrodes; in this way he increased the invisible ultra-violet portion of the spectrum so much that it became four times longer than the visible part. The ultra-violet light was made visible by projection on a screen of barium platino-cyanide. Dr. Strebel has found that in the apparatus of Professor Finsen of Copenhagen for the treatment of lupus the ultra-violet rays are almost totally absorbed, so that its bactericidal power depends on the relatively feeble action of the visible blue and violet rays. By this new discovery a powerful bactericidal effect is obtained from light, and the method is made so simple that any form of Roentgen ray apparatus may be employed therapeutically as a source of light instead of the complicated and expensive apparatus of Professor Finsen. Dr. Strebel is now occupied in determining the permeability of certain media by the ultra-violet rays and their action on the different species of bacteria. He is also trying to ascertain whether the rays given off by uranium and radium, of which the action is similar to the x rays, are bactericidal and therefore capable of being used in the treatment of diseases of the skin. A more detailed account will be given by Dr. Strebel in a few weeks.

Some Reforms in the Army Medical Corps.

The Army Medical Department has decided to complete the organisation of the Kaiser-Wilhelm-Akademie, the training school for army medical officers, by the appointment of a "scientific council." According to the *Vossische Zeitung* the council will consist of 15 members under the presidency of the general staff surgeon of the army and its duty will be to advise the Army Medical Department in scientific questions of every kind. The council will deal with questions relating to the curriculum of the students of the academy, the organisation of its collections and laboratories, and the post-graduate study of military surgeons. In addition to questions connected with the academy the council will be consulted in matters of military hygiene, especially the prophylaxis of epidemic diseases, and in difficult judicial cases the council will give a professional opinion when a court-martial requires advice as to the state of mind of an accused person. The names of the members of the proposed council are not yet known, but probably they will consist not only of army medical officers, but also of prominent civilian medical men, hygienists, &c. As the general expenses will be 3000 marks (£150) per annum membership of the council will be an honorary position only. Another reform will be the abolition of the examination for the rank of Oberstabsarzt. This examination was on matters of special military interest only and had to be passed before a special commission in Berlin consisting of military surgeons and Professor Koch, Professor Bergmann, and Professor König of Berlin University. Those who wished to be promoted to the higher ranks in the active as well as in the reserve Army Medical Corps had to present themselves. The reason given by the War Office for the abolition of this examination is that the professional training of army medical officers has at present become so good that a special examination is no longer necessary. The duration of post-graduate courses will be extended from three to four weeks every year, and a greater number of military surgeons will have the opportunity of taking part in them. By these measures the War Office expects to induce civilian medical men in greater number than before to enter the active Army Medical Corps, the members of which have hitherto almost exclusively come from the Army Medical Academy.

Dec. 10th.

ROME.

(FROM OUR OWN CORRESPONDENT.)

Discovery of a Statue of Æsculapius in the Roman Forum.

AMONG the recent interesting finds in the Roman Forum is a statue of Æsculapius. It was lying face downwards under the central niche of the large arched space surrounding the Well of Juturna, which has lately been excavated under the direction of Professor Boni. The head of the figure and the middle of the right arm are wanting, but the other parts are well preserved. It represents the god, with a *volumen* (or roll of paper or parchment on a stick) in the left hand, leaning on his staff, round which is coiled the serpent, the symbol of prudence and renovation. Close to the staff is a child, supposed to be Camillus or Telesphorus, the genius of recovery, in the act of bringing the offering of a cock in his left hand and holding in his right hand a small knife with a pointed blade. The well enjoyed a reputation for the salubrity of its water, and this fact explains, no doubt, the presence in its precincts of the statue of the god of medicine, under whose special protection such wells were placed. The worship of Æsculapius is said to have been introduced into Rome from Epidaurus about 293 B.C., but this statue, which is of indifferent workmanship, belongs to a much later period, probably the first or second century of the Christian Era.

Antirabic Institute in Florence.

In this institution, founded through the initiative of Professor Grocci and inaugurated in January, 1899, the medical staff had subjected to the Pasteur treatment up to Nov. 15th, 1900, 591 persons who had been bitten by animals suffering, or suspected to be suffering, from hydrophobia. Advice was given in 957 cases at the request of private individuals or of communal authorities, and diagnostic experiments were carried out on 235 animals sent to the institute with the object of ascertaining whether or not they were hydrophobic. The institute forms a section of the General Medical Clinic of Florence and is under the care of Dr. Daddi and two assistants. The charge for a course of treatment is 50 lire

[1] THE LANCET, Oct. 14th, 1899, p. 1045, and Feb. 24th, 1900, p. 581.

(not quite £2), but the poor, wherever they may come from, are treated gratuitously.

Dec. 1st.

NEW YORK.

(FROM OUR OWN CORRESPONDENT.)

The Housing of the Poor in New York City.

ONE of the most important commissions ever appointed in this city is now sitting. The problem of housing the poor in a sanitary and decent manner has for long been a stumbling-block to municipalities and philanthropists in all the large towns of the world. In New York, owing to the lack of space available, it presents itself in an aggravated form. In truth, too, it must be said that public and private enterprise has lagged strangely in trying to improve existing conditions. However, it seems now that the State authorities of New York have resolved to grapple with the difficulty in a serious manner, and as an earnest of this Governor Roosevelt some little time ago appointed a representative commission to inquire closely into the whole matter. The first of the hearings dealt with the question as to the bearings of the question on tuberculosis, and, as may well be imagined, came to the conclusion that the construction of airy, properly ventilated, hygienic tenements would go far towards checking the development and spread of that scourge. No more effective preventive measures than providing the poor with the means of living in a fairly healthy manner could be undertaken. The second hearing considered the construction of the tenements as regards size, dark hall-ways, badly built air-shafts, and the like. The commission for some months past has been collecting evidence from builders, sanitary experts, and others who possess views on the subject. As may be believed, the advice tendered has had an extremely wide range, the opinions of the various witnesses being in some instances as diverse as the poles. In fact, such a flood of advice has rushed in that it probably has been the cause of a certain amount of embarrassment to the commissioners. The tenement laws of other countries have been carefully studied for the purpose of comparison. But, after all, the conditions in New York and in any American or European city are so different that while, doubtless, the commission will see fit to advise the adoption of some of the methods used in housing the poor in other large centres of population, in the main it will conclude that New York must strike out a line of her own and in erecting tenements must adapt herself to her environment. These remarks will be better understood when it is stated that Greater New York has more than 86,000 tenements with 2,250,000 tenants inhabiting them. The commission will also have regard to the subject from the moral standpoint. The overcrowding in New York is almost beyond comprehension, and the assertion is made that at the present time in the Italian quarter 40 families are existing in flats built to contain 16. Of course, this is as immoral as it is contrary to the laws of health. The *New York Sun*, in an editorial article treating of the Tenement Commission, says: "New York's housing problem is the problem of its metropolitan growth, not easy to solve, but to be solved at any cost, for at bottom it is the question of the home from which proceeds citizenship, good or bad as the home may be." London has been wrestling with the problem for many years, and although fairly successful has by no means yet reached a final solution. Consequently she will take an intelligent and kindly interest in the struggles of her big sister on this side of the water to improve the conditions of her poor. The prediction may be safely made that the New York Tenement House Commission will effect much towards this desirable end.

Separate Prisons for Consumptive Convicts.

In the United States it has long been recognised that neither the convicts who are suffering from consumption nor those who are compelled to live in close proximity to them are quite fairly treated. The hygiene of a prison is too often neglected. The offender against the law has, of course, no choice as to his accommodation but must live wherever the authorities wish, whatever the conditions may be. Dr. Rohe, a prominent writer on hygiene, says: "The mortality of convicts, even in the best regulated prisons where especial attention is paid to sanitary requirements of such buildings, is three times as great as among workmen in mines, confessedly one of the most dangerous occupations. More convicts die of consumption than of all other diseases combined." Dr. Rohe puts the mortality from this cause at from 40 to 80 per cent. of these deaths. Dr. W. H. Blake, physician on the Board of Inspectors of Convicts for Alabama, has protested many times against this heartless treatment of prisoners, and recently he read before the Medical Association of the State of Alabama a paper treating of the matter. He states that in Alabama the record of deaths for State convicts covers a period of 18 years. For the first half of this period consumption caused 20·3 per cent. of the total mortality; for the last half it caused 42 per cent. In the penitentiaries of different States, of the total deaths the percentage caused by consumption is as follows: Mississippi, 20 per cent.; Arkansas, 20 per cent; Florida, 30 per cent.; Ohio, 31 per cent.; Michigan, 33 per cent.; Alleghany County Workhouse, Pennsylvania, 33½ per cent.; Virginia, 41 per cent.; Kentucky, 42 per cent.; Joliet, Illinois, 70 per cent.; Huntsville Penitentiary, Texas, 66 per cent.; Rusk Penitentiary, Texas, 33 per cent.; Washington, 16 per cent.; Connecticut—1898, 60 per cent., and in 1897 every death that occurred in the penitentiary of Connecticut was caused by consumption." It is now an established fact that under favourable conditions tuberculosis can be transmitted from person to person, and, as Dr. Blake points out, prisons afford these conditions in a strikingly favourable manner. For example, in the prisons of Alabama convicts are not kept in separate cells, but from 50 to 100 are confined together in a single large cell. Consumptive convicts, unless acutely ill, are confined in the same cells as the healthy convicts. Dr. Blake suggests as the only remedy for this condition the separation of the consumptive from the non-consumptive convicts. Something more is needed than separate wards in the same building or separate buildings on the same grounds. A separate camp should be provided for consumptive convicts, the farther from the other prisons the better, in order to give the non-tuberculous prisoners the greatest possible immunity from the disease. It is argued, and rightly too, that the State has a right to deprive the offender of his liberty but that it has not the right to deprive him of his health.

Mosquitoes and Yellow Fever.

It will probably be remembered by many readers of THE LANCET that several years ago—in 1882—a physician practising in Havana advanced the theory that a species of mosquito was the agent of transmission of yellow fever. Dr. Finlay, the medical man in question, who still strongly adheres to his belief, does not look upon the mosquito as the intermediate host of yellow fever, but he holds that the mosquito is capable of transmitting the disease directly to man. Other investigators since the time that Dr. Finlay broached his daring opinions have declared views more or less to the same effect. However, but little notice has been taken of these statements, and probably had it not been for the success attending the researches of Manson, Ross, and others in demonstrating to the satisfaction of the majority of scientific men that mosquitoes were chiefly responsible for the dissemination of malaria the matter would not have come to the front now. Encouraged by the favourable results attending the investigations of the malaria problem and anxious to drive out yellow fever from this part of the world a commission of United States army surgeons have for some time been working in Havana. The surgeons comprising the commission were Dr. Reed (surgeon, U.S.A.) and Dr. James Carrol, Dr. A. Agramonte, and Dr. Jesse W. Lazear (acting assistant surgeons, U.S.A.). Dr. Reed read a paper before the Public Health Association at its last meeting in Indianapolis, Ind., in which the conclusions reached by the commission were stated. These conclusions were as follows. Treating of the bacteriology of the disease: (1) The blood taken during life from the general venous circulation on various days of the disease in 18 cases of yellow fever successfully studied has given negative results as regards the presence of bacillus icteroides (Sanarelli); (2) cultures taken from the blood and organs of 11 yellow fever cadavers have also proved negative as regards the presence of the bacillus; and (3) bacillus icteroides (Sanarelli) stands in no causative relation to yellow fever, but when present should be considered as a secondary invader in this disease. As regards the part played by mosquitoes in the propagation of yellow fever the commission state their conclusions thus: "The mosquito serves as the intermediate host for the parasite of yellow fever and it is highly probable that the disease is only propagated

through the bite of this insect." It should also be said that the sinning mosquito, culex fasciatus (Fabr.), was identified. The space at my disposal is too limited to describe the experiments which led to the foregoing deductions, and it would be premature to express a definite opinion on the matter. This much, however, may be remarked without prejudice, that experiments will have to be conducted on a larger scale, and the whole question must be more closely investigated ere the assertion that "it is highly probable that the disease is only propagated through the bite of the mosquito" will be generally accepted. The commission have done excellent work and deserve well of their country. I regret to say that two of the members of the commission—Dr. Lazear and Dr. Carrol—fell victims to their unselfish devotion. Both contracted yellow fever while pursuing their experiments and Dr. Lazear succumbed to the disease.

Dec. 5th.

AUSTRALIA.

(FROM OUR OWN CORRESPONDENT.)

The Sanitary State of Sydney.

IF Sydney is not made a sanitary city it will not be for want of reports as to its condition. Quite recently reports were published from the medical officer of the Sewerage Board and from the city health officer, and now another has been presented by Dr. W. G. Armstrong, the Government officer of health of the metropolitan combined sanitary districts, and dealing with a much larger area, including not only the city of Sydney but 40 suburban boroughs and seven adjacent municipalities in the neighbourhood of Parramatta with a population of 456,320. The report deals with the year 1899, its publication having been delayed by the outbreak of bubonic plague, which engaged all the energies of the medical officer for the time being. The report states that all the local authorities are hampered in their administration of the Health Act by want of funds, as the Act does not give powers to raise the necessary means by a special sanitary rate and the ordinary incomes of municipalities are already ear-marked for other purposes. Sydney is one of the most lightly taxed of all large cities and could well support a tax for sanitary purposes. Dr. Armstrong has corrected the returns of the Registrar-General as to vital statistics by obtaining the domicile of all persons dying in the metropolis, and properly distributing them, and he finds that the proper death-rate of the metropolis is 12·39 per 1000. The deaths from typhoid fever were more numerous in 1899 than in the previous year, as were those from phthisis. There was a remarkable decline in the incidence of diphtheria, of diarrhœal diseases, and of scarlet fever. Nearly twice as many cases of typhoid fever occurred in the unsewered districts as in the sewered—viz., one case of typhoid fever to 160 sewered dwellings and one case to 84 unsewered dwellings, notwithstanding that poverty and overcrowding were greatest in the sewered districts, and that in the city of Sydney itself the connexions with the sewers were very faulty. Some improvement was noted in the condition of dairies and the number classed as "bad" had been reduced from 57 to 34, but the existence of 34 badly kept dairies out of a total of 503 is a serious reflection upon the manner in which the Dairies Supervision Act is administered by the local authorities. Concerning common lodging-houses, Dr. Armstrong reports that some were unfit for habitation altogether and others were unfit for use as lodging-houses. The chief faults found were insufficiency of ventilation, paucity of sanitary accommodation, and overcrowding. The need of securing more efficient sanitary inspectors is strongly insisted upon. The first step is to give these men security of tenure and to pay them a fair salary, and for the Government to assume control over their appointment and dismissal. During the year Dr. Armstrong gave a series of 15 lectures on sanitation and sanitary law to sanitary inspectors, and at the end of the course an examination was held. On the whole the report is satisfactory.

The Australian Natives Association and the Profession in New South Wales.

The board of directors of the Australian Natives Association have had a conference with the council of the New South Wales Branch of the British Medical Association with reference to the recent resolution passed by the branch practically prohibiting its members from acting as medical officers to the Australian Natives Association. Four delegates were appointed by each side, and Dr. W. H. Coutie, President of the Branch, was voted to the chair. The delegates of the Australian Natives Association presented their views, claiming that the association should be placed on exactly the same footing as the other friendly societies with regard to medical services. The medical delegates agreed to consult with the council of the New South Wales Branch of the British Medical Association and to report the result.

Farewell to Dr. Laure.

Dr. Laure, after practising for 32 years in Sydney, is leaving for France, his native country. Before his departure he was entertained at a banquet by a company of representative citizens, including members of the medical profession, well-known musicians, and a large proportion of the "Colonie Française" in Sydney. The chair was occupied by the Acting Consul-General for France who, in proposing Dr. Laure's health, referred to his good work as a principal medical officer of the marine and his ability and self-sacrifice in the practice of his profession, especially during a time of epidemic, for which he was decorated. During 14 years at St. Vincent's Hospital in Sydney he had done splendid work, and as President of the French Benevolent Society since its foundation he had won the gratitude of all who had come under his care. He had a sincere love of the fine arts and had won the warm friendship of a wide circle. Dr. C. MacLaurin spoke on behalf of the medical profession, the members of which had nothing but the highest esteem for Dr. Laure, who was honourable, upright, and straightforward and a most desirable colleague. Dr. Laure was presented with an illuminated address from the French community expressive of their regard and good wishes.

Death of Dr. J. W. Hester.

Great regret has been felt in Sydney and Newcastle at the untimely death of Dr. J. W. Hester. Dr. Hester was born in 1865 and was educated at the Sydney University, where he graduated as M.B. and Ch.M., obtaining honours in every subject every year and winning the Renwick Scholarship and gold medal. He settled in practice at Stockton, where he remained for 10 years, during the greater part of which he was surgeon to the Newcastle Hospital. Upon the departure of his brother-in-law, Dr. R. Scot Skirving, for South Africa, Dr. Hester came to Sydney to carry on Dr. Skirving's practice and was appointed assistant surgeon to the Prince Alfred Hospital. He had hardly been established in Sydney before he was attacked with a serious affection of the heart which proved fatal. Dr. Hester was held in high esteem in Stockton and he took an active part in many public movements. He was especially a prominent figure in all kinds of athletics and was an officer of almost every amateur sporting and athletic club in the district.

A Case of Hernia into the Foramen of Winslow.

In the *Australasian Medical Gazette* for October is recorded a very interesting and rare case of intestinal obstruction due to hernia of the transverse colon into the foramen of Winslow. The patient, a woman, 47 years of age, was seen by Mr. H. J. F. Groves of Broken Hill, with symptoms of intestinal obstruction, and then by Dr. R. Humphrey Marten of Adelaide, in consultation. The symptoms began on May 10th, and on May 17th, as they had not improved, operation was decided on. The symptoms were: no action of the bowels since May 10th, vomiting, constant regurgitation of sour, frothy liquid, and slight but increasing distension, with borborygmi, stopping short on the right of the middle line below the liver, where there was tenderness. When the abdomen was opened dark red-coloured serous fluid escaped. The sigmoid and descending colon were empty, the cæcum and ascending colon were greatly distended, and on being followed up the distended transverse colon passed under the liver and under a band which was found to be the front wall of the foramen of Winslow, with the hepatic artery pulsating in it. The gut was easily withdrawn. The intestines were so distended and paralysed that a double enterotomy was performed. The small intestine was opened, emptied, closed with sutures, and returned; the cæcum was stitched to the wound and opened; and an artificial anus was formed which has remained permanent and at the request of the patient has not been closed, as it acts as a safety-valve in case of recurrence of obstruction, as has happened.

Nov. 4th.

Obituary.

GEORGE HUTCHINSON MILNES, M.D. CANTAB., L.R.C.P. Edin., M.R.C.S. ENG., LATE R N.

DR. MILNES, who died on Dec. 3rd from the effects of an overdose of morphia administered by himself for the relief of toothache, was a well-known and respected practitioner in Derby. He received his early education at Repton School and afterwards studied at Cambridge and at St. George's Hospital. In 1880 he became a Member of the Royal College of Surgeons of England, and in June of the following year was appointed house physician at St. George's Hospital. In 1882 he obtained the post of house physician at Addenbrooke's Hospital, Cambridge, where he stayed till the end of 1884. A few months later he graduated at the University, first as Bachelor of Arts and subsequently as Bachelor of Medicine. In 1886 he entered the Royal Navy as surgeon. While in medical charge of H.M.S. *Starling* he took part in the defence of Suakim against the Dervishes (from October to December, 1888), and was present in medical charge of the Naval Brigade at the action of Gemaizeh on Dec. 20th, for which he received the Egyptian war medal with the Gemaizeh clasp and the Khedive's bronze star.

On his return to England in 1890 he was appointed surgeon to the Royal Naval Hospital at Haslar and assistant instructor in hygiene. This position he held but a short time, and on resigning his office gave up his commission. He then, in 1891, took the degree of Doctor of Medicine at Cambridge and four years later was appointed physician to the Derbyshire Royal Infirmary, a position which he held at the time of his death. He also held the post of consulting physician to the Derbyshire Hospital for Women. During his four years' service in the Royal Navy he specially interested himself in the study of fevers prevalent on the shores of the Mediterranean and Red Seas and contributed to THE LANCET some notes on this subject.

ALEXANDER DEAS DAVIDSON, M.A., M.D. CANTAB., M.R.C.S. ENG., L.S.A.

DR. ALEXANDER DEAS DAVIDSON died at his residence, Northampton-place, Swansea, on Dec. 7th, after a short illness, from acute phthisis. The deceased, who was educated at Clare College, Cambridge, graduated B A. with honours at Cambridge University in 1872, and three years later he was admitted M A He received his medical education at St Thomas's Hospital and took the M.R.C S. Eng. and L.S.A. qualifications in 1877, and in 1880 graduated M.D. of Cambridge. After holding the appointments of resident clinical assistant at the Bethlem Royal Hospital and ophthalmic assistant at St. Thomas's Hospital, Dr. Davidson commenced practice in Swansea in 1882. Shortly afterwards he was appointed medical officer to the out patient department of the Swansea General and Eye Hospital, and later ophthalmic surgeon to that institution. Dr. Davidson, who was only 51 years of age at the time of his death, will be much missed in Swansea, where he had gained a reputation as a skilful ophthalmic surgeon.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced:—Dr. Henry D. Noyes, Professor of Ophthalmology in the Bellevue Hospital Medical College, New York.—Dr. Podrèz, Professor of Clinical Surgery in the University of Kharkoff.—Dr. Gustav Hartlaub, a well-known Bremen practitioner, who was an authority on ornithology, has died at the age of 86 years.

MEDICAL ATTENDANCE ON SEAMEN.—At the Cardiff County Court on Dec. 6th, before Judge Owen, the committee of the *Hamadryad* Seamen's Hospital sued the Bristol Steamship Navigation Company for medical attendance upon a seaman in defendant's employ whilst in the hospital for 72 days. Evidence showed that the ship owned by defendants arrived at Cardiff on Feb. 3rd and that the man was injured whilst on board the following day. His honour gave judgment for defendants with costs, holding that shipowners are not responsible for injuries received by a seaman whilst in port, but having regard to the importance of the question leave to appeal was granted.

THE GENERAL COUNCIL OF MEDICAL EDUCATION AND REGISTRATION.

WEDNESDAY, DEC. 5TH.

THE Council met again to-day, Sir WILLIAM TURNER presiding. For nearly two hours the proceedings were conducted *in camerâ*.

Inspection of the Final Examinations.

The PRESIDENT announced that Sir George Duffey had accepted the appointment of inspector of final examinations for the year 1901.

The Examinations of the Apothecaries' Hall of Ireland.

The PRESIDENT also announced that Dr. W. Parker Herringham, M.D. Oxon., F.R.C.P. Lond., assistant physician to St. Bartholomew's Hospital, had accepted the appointment of inspector of the examinations of the Apothecaries' Hall of Ireland.

Restoration to the Medical Register.

The PRESIDENT further announced that the Council had instructed the Registrar to restore the name and qualifications of Mr. Robert Ingram Robertson to the Medical Register.

The Examinations of the Apothecaries' Hall of Ireland.

The Council resumed the consideration of the motion that the reports of the Examination Committee on the Inspection of the July and October examinations of the Apothecaries' Hall of Ireland be received and entered on the minutes.

Mr. TICHBORNE took exception to several passages in the report on the inspection of the October examination and moved that they be deleted, and Mr. BROWN seconded the motion.

Sir DYCE DUCKWORTH, speaking as Chairman of the Examination Committee, said that he objected to the omission of any part of the report. It was well known that this body had given the Council an immense amount of trouble and anxiety and that for years it was a body under considerable suspicion.

Mr. TICHBORNE objected to these observations because he said this examination body never did receive any condemnation; it was another examination body, conjoint with the Apothecaries' Hall, and he considered it extremely unfair of Sir Dyce Duckworth to make these observations.

Sir DYCE DUCKWORTH said it was this body in conjunction with another body whose examination came under the very severe condemnation of this Council, and as the result this body became subject to the authority of this Council. The examinations were held by order of the Privy Council under the ægis of this Council and therefore they had to watch very closely the work done. In these reports the Examination Committee had to do something more than merely reflect the opinions of their inspector. They had to analyse and to inquire and to put a clear and unvarnished statement before the Council. He was now speaking for the last time as the Chairman of the Examination Committee and he wished to say this most distinctly. The committee did not exist to please any body but to do their duty.

The proposal of Mr. TICHBORNE to delete certain passages was rejected by a large majority. Subsequent proposals to delete upon a smaller scale were also rejected and thereafter the motion to receive the reports and enter them on the minutes was adopted by the Council.

Dr. ATTHILL moved:—

That the opinion of counsel be taken as to whether any examiner appointed to take part in the examinations held by the Apothecaries' Hall of Dublin for their registrable qualifications, other than the governor, deputy governor, and director of the said Hall, being the examiners authorised by the Act 31 Geo. III., should not in accordance with the terms of the Medical Act (1886) be appointed by this Council.

He had no animus against Apothecaries' Hall and he did not wish to put it either to expense or trouble, but he desired the law made clear and the Hall complying with the law.

Dr. BENNETT, in the absence of Dr. LITTLE, seconded the motion.

Mr. TICHBORNE protested against this proposed waste of the Council's money. As for Dr. Atthill's statement about his good wishes to the Hall, he was afraid it would be

received with smiles in Dublin. Mr. Tichborne then proceeded to argue that under certain ancient Acts the Hall had practically a free hand in the matter of appointing examiners.

Dr. MCVAIL rising to a point of order asked the President whether this Council had anything whatever to do with any Act antecedent to the Medical Act of 1858. If anybody in Ireland thought that the Apothecaries' Hall was not acting legally and felt aggrieved then that body could take the matter before the Four Courts in Dublin.

The PRESIDENT said it was difficult for him to say whether from the point of view taken by Dr. McVail this matter was or was not in order. It raised a legal question and it was not for him to give an opinion upon a legal question.

Dr. ATTHILL said that he held that it was this Council who were aggrieved, whose rights were being infringed. So long as the Hall kept to its governors and directors this Council had no *locus standi*, but when the Hall went beyond them he contended it was for this Council to appoint the examiners.

Several members urged that the matter should be postponed until next session.

Mr. TICHBORNE said that the whole question had been thoroughly discussed and examined before the Privy Council and he assured the General Medical Council that in all they had done his body had acted within their rights.

The PRESIDENT said he would go so far as to say this, that if this motion, or any motion on the same lines, were sent to him by Dr. Atthill with a view to discussion on another occasion he would ask Mr. Muir Mackenzie to advise him as to its competency.

Dr. ATTHILL said that if it were understood that the President would ask the advice of Mr. Muir Mackenzie before next session in May that would satisfy him.

The PRESIDENT: You must send the motion to me.

On this understanding Dr. Atthill withdrew his motion.

Prevention of Personation.

On the motion of Mr. HORSLEY the following report of the Committee upon the prevention of personation was received and entered on the minutes:—

In the opinion of the Solicitor the Council is fully empowered, under Section XIV., Medical Act, 1858, to frame and enforce the proposed regulation that applications for registration must be made in the handwriting of the applicant on an official form.

In making his motion Mr. Horsley regretted that he had to drop discussion of the personation question for this session because the business hours of the session had been squandered on what he should call squalid business. He promised, in answer to Dr. MacAlister, that he would see that the Council were supplied with the text of the case submitted to the solicitor and copy of the reply thereto.

Regulations for Diplomas in Public Health.

A report of the proceedings of the whole Council in committee on the regulations for diplomas in public health was brought up by Dr. MacAlister, as chairman, and was agreed to.

Mr. TEALE then moved that the following be the General Medical Council's

RESOLUTIONS AND RULES FOR DIPLOMAS IN PUBLIC HEALTH FROM THE 1ST OF JANUARY, 1902.

I. The Council, having regard to the terms of Section 18 of the Local Government Act (1888) and of Section 54 of the Local Government (Scotland) Act (1889), and observing that under these sections special privilege is to be accorded to the holders of the diplomas granted under Section 21 of the Medical Act (1886), and therein described as diplomas in sanitary science, public health, or State medicine, thinks it essential to declare, with regard to its own future action under Section 21 of the Medical Act (1886), that it will not consider diplomas to "deserve recognition in the Medical Register" unless they have been granted under such conditions of education and examination as to insure (in the judgment of the Council) the possession of a distinctively high proficiency, scientific and practical, in all the branches of study which concern the public health; and the Council, in forming its judgment on such conditions of education and examination, will expect the following rules to have been observed:—1. A period of not less than 12 months shall have elapsed between the attainment of a registrable qualification in medicine, surgery, and midwifery and the admission of the candidate to any examination or any part thereof for a diploma in sanitary science, public health, or State medicine.

2. Every candidate shall have produced evidence that after obtaining a registrable qualification he has during six months received practical instruction in a laboratory or laboratories, British or foreign, approved by the licensing body granting the diploma, in which chemistry, bacteriology, and the pathology of the diseases of animals transmissible to man are taught.

3. Every candidate shall have produced evidence that after obtaining a registrable qualification he has during six months (of which at least three months shall be distinct and separate from the period of laboratory instruction required under Rule 2) been associated day by day in the duty, routine and special, of public health administration, under the supervision of

(*a*) In England and Wales, the medical officer of health of a county or of a single sanitary district having a population of not less than 50,000, or a medical officer of health devoting his whole time to public health work; or

(*b*) In Scotland, a medical officer of health of a county or counties, or of one or more sanitary districts having a population of not less than 30,000; or

(*c*) In Ireland, a medical superintendent officer of health of a district or districts having a population of not less than 30,000; or

(*d*) A medical officer of health who is also a teacher in the Department of Public Health of a recognised medical school.

*** The certificate of an assistant medical officer of health of a county or of a single sanitary district having a population of not less than 50,000 may be accepted as evidence under Rule 3, provided the medical officer of health of the county or district in question permits the assistant officer to give the necessary instruction and to issue certificates.

4. Every candidate shall have produced evidence that after obtaining a registrable qualification he has attended during three months the practice of a hospital for infectious diseases at which opportunities are afforded for the study of methods of administration.

5. The examination shall have been conducted by examiners specially qualified; it shall have extended over not less than four days, one of which shall have been devoted to practical work in a laboratory and one to practical examination in, and reporting on, subjects which fall within the special outdoor duties of a medical officer of health.

*** The rules as to study shall not apply to medical practitioners registered, or entitled to be registered, on or before Jan. 1st, 1890.

II. The Council shall from time to time appoint an inspector or inspectors of examinations in Public Health, with special instructions to report to the Council whether the examination of each licensing body does or does not afford evidence on the part of candidates passing such examination of a distinctly high proficiency, scientific and practical, in each and all of the branches of study which concern the public health.

Sir HECTOR CAMERON, noticing some remarks by Dr. Pye-Smith relative to the application of Anglo-Indians for the diploma in public health, pointed out that the burden the committee had to consider was the burden of time. Anglo-Indian applicants, he said, had usually only a year in which to come from India, obtain the diploma and return to their duties. By the resolutions and rules now submitted the time required for the diploma was compressed into nine months, the last attendances on an infectious hospital being really meant to run concurrently with the rest of the requisite education. That meant a reduction of three months in the matter of time, but certainly the burden was somewhat increased by the new rules in the matter of education.

The adoption of the rules was agreed to, and it was further resolved that a copy thereof should be transmitted to the several bodies which grant diplomas in Public Health.

Education Committee's Reports.

On the motion of Sir JOHN BATTY TUKE, seconded by Dr. MACALISTER, three reports by the Education Committee were received and entered on the minutes. These reports were on: (1) the steps taken for raising the standard of preliminary examination; (2) an application from an American university for the recognition of its arts examinations; and (3) the "Medical and Pharmacy Act Amendment Act, 1899," of the Cape of Good Hope.

The report on the steps taken for raising the standard of preliminary examination was as follows. The Education Committee, at the last meeting of the Council, was "authorised to take all needful steps to give effect to the recommendations and suggestions for the improvement of preliminary examinations" contained in the joint report of their expert advisers, and to report from time to time to the Council thereupon.

The committee, in pursuance of this instruction, have communicated the joint report to all the educational bodies which hold recognised preliminary examinations within the United Kingdom, and have invited them to inform the committee as to the steps they propose to take for the improvement, when necessary, of their examinations. From a large number of the bodies they have received answers which indicate that they are anxious to coöperate with the Council in raising the standard of preliminary education among medical students and that they are prepared to do what is necessary towards meeting the recommendations submitted to them.

The committee have forwarded the answers and the proposed changes in examinations therein proposed to Professor McCormick for his opinion and advice and they have pleasure in communicating to the Council the following passages from the interim report to the Chairman thereupon:—

To Sir John Batty Tuke, M.P. St. Andrews, Nov. 20th, 1900.

DEAR SIR,—I beg to inclose communications received as to the report of the Education Committee adopted at the last meeting of the General Medical Council. In the terms of that report (p. 31) the various bodies holding examinations at present recognised by the General Medical Council were requested to state how far in their opinion their respective examinations met the requirements of the proposals contained in that report and how far it would be desirable or possible for them to make modifications in their examinations to that end. This request has already been complied with by the following bodies:—

1. Oxford and Cambridge Schools Examination Board.
2. Oxford Local Examination Delegacy.
3. Cambridge Local Examination Syndicate.
4. Senate of the University of Birmingham.

5. Scotch Education Department.
6. Senate of the University of Aberdeen (Local Examination Board).
7. Educational Institute of Scotland.

These communications contain certain questions of detail demanding the consideration of your committee; and I subjoin remarks as to these minor points, which might be embodied in answers to the several authorities, if they meet with your approval.

Many of the bodies from whom no communication has yet been received have been unable to hold a meeting since the report was issued, but I have little doubt that before the Spring Session communications from all the bodies concerned will be received.

Meanwhile, those already received may be regarded as giving promise of a successful issue to your committee's proposals of reform.

The three first-mentioned bodies (of Oxford and Cambridge) report upon their respective examinations in full detail under the five heads laid down in your committee's report, and also indicate their willingness to make such an arrangement as will raise the qualifications of medical preliminary candidates on the lines of the committee's recommendations.

The Senate of the University of Birmingham, in reporting upon its preliminary examinations, "begs to assure the General Medical Council of its sympathy on educational grounds with the general trend of the recommendations contained in the report, and its desire to see them carried out in practice."

Sir Henry Craik, in acknowledging for their lordships of the Scotch Education Department the proposals of the Education Committee, which are met generally by the lower grade leaving certificate in its present form, adds that, "should circumstances in the future render any modification of that form desirable, their lordships will not fail to keep the wishes of the General Medical Council carefully in view."

These and similar expressions of opinion which have been received informally from representatives of other bodies show that the proposals of the Education Committee are meeting with general approval among the educational authorities of the United Kingdom and that the committee will have their cordial help in promoting the desired reforms.

I may also add that I was present at a conference of the Education Committee with representatives of the College of Preceptors, at which proposals were put forward and discussed as to the lines on which that body might best meet the committee's recommendations.

I remain, yours truly,
W. S. MCCORMICK.

Communications from certain other bodies, including the College of Preceptors, have since the date of the above been received by the committee and are at present under consideration. A certain number of the recognised examinations held for other than medical purposes which the bodies concerned are not prepared to alter will with their full assent be omitted from the list of recognised examinations which the committee have in preparation.

The report in respect to the application from an American university for the recognition of its arts examinations was as follows:—

The committee have carefully considered the application of another American university for the recognition of its arts examinations. They have resolved that they are not at present prepared to recommend the Council to place these examinations on their list.

The report on the "Medical and Pharmacy Act Amendment Act, 1899, of the Cape of Good Hope," shows that the Act of the Legislature of the Cape of Good Hope, courteously forwarded by the Secretary of State for the Colonies, has been referred to the committee by the Executive Committee. They are of opinion that the Act contains many salutary provisions, of which not a few might with advantage be extended to other portions of the empire.

Medical Aid Associations.

Dr. GLOVER submitted a report by the Medical Aid Associations Committee which was as follows:—

In making an interim report your committee have to announce that they continue to receive from various parts of the country painful proof of a certain amount of friction between the profession and medical aid associations, especially such associations as are conducted on commercial principles, with the aid of canvassing, advertisements, &c. The loyalty of the great mass of the profession to the regulations of the Council with regard to such practices should be fully realised by the Council; the more so as in several towns it has entailed at least temporary loss on some practitioners who have resigned appointments rather than expose themselves to the charge of violating the wishes of the Council. One such case has been formally brought to the notice of the Council, in the form of a complaint against a practitioner who, it is alleged, accepted office where such practices are allowed. The case, unfortunately, was brought forward too late for consideration at the present meeting. The committee continue to believe that in regard to those medical aid associations, composed for the most part of the great friendly societies, the most promising method for removing differences is in the creation of a conciliation board. The Medical Council has done all in its power to recommend and promote the creation of such a board.

The success of such efforts must rest now with the profession itself, acting through its voluntary associations, and especially the British Medical Association, the Council of which a few months ago appointed a committee to treat directly with the friendly societies on this subject. Its resolution is in the following terms:—

"The Council appoints a committee to confer with the representatives of the friendly societies with a view to drawing up a scheme for the formation of regulations regarding the powers and duties of the proposed conciliation board."

The President of the British Medical Association is the president of this committee. We are kindly informed by him that the committee has met once and decided on some matters of principle. It is to be hoped that before the meeting of the General Medical Council in May your committee will be able to give a final report on this important subject.

At the instance of Mr. HORSLEY the phrase "a certain amount of friction" (which occurs near the beginning of the report) was altered to "a serious amount of friction."

The report as amended was received and entered on the minutes.

Mr. BROWN thought that the Council ought to make very clear to practitioners connected with medical aid associations their position as regards unprofessional conduct. There was ambiguity about all the past resolutions on the subject, and because of that there were districts of the country in which medical officers of such associations who were on the Medical Register had resigned good appointments and others in the same districts who remained in their appointments, apparently because they did not know exactly what the Council wanted the profession to do. Unless the Council made their position perfectly clear they would have practitioners coming to their Registrar saying that they did not understand what the Council meant. He had framed a motion whose terms he did think clear and at the same time not too strong, and it was this:—

That notices be published by advertisement and otherwise to the effect that association with medical aid societies and clubs which systematically canvass for patients may be regarded by the Council as infamous conduct in a professional respect, rendering any practitioner proved to be guilty thereof liable to have his name removed from the Medical Register.

He believed that if the Council passed this proposal they would be expressing the feelings of every man in the profession who was worthy of having his name retained on the Medical Register.

Dr. BRUCE seconded.

In the course of some conversation it was suggested by Dr. MACALISTER that the Council could not judiciously consider the proposal because it would affect a penal case now pending, and in the circumstances it would be indecent on the part of the Council to pass any such motion.

Mr. BROWN withdrew the proposal in the meantime.

Financial Condition of the Council.

The next business was the receipt of a report from the Special Finance Committee, re-appointed on May 31st, 1900, to consider and report on (1) the financial position of the Council and its branches as regards assets and liabilities; (2) the relations of the income and expenditure of the Council and its branches for the last 10 years; and (3) the measures that appear to be desirable to place the Council's finances on a satisfactory basis. The report was submitted by Mr. BRYANT and the following are extracts from it:—

The assets of the General Council, the Branch Councils, and the Dental Fund consist of the following:—

(1) The freehold property vested in the Council, which consists of the Council's building, the contiguous house in Hanover-square, and the site on which they stand; (2) consolidated stock, to the credit of the English and Scottish Branch Councils and the Dental Fund, which amounts to £23,773; and (3) cash in bank, £2696.

The English branch holds, as a security for a loan to the General Council, a mortgage on the freehold property for £25,007. This will be paid back to the branch in 1949 by the Alliance Company through the operation of the sinking fund hereafter mentioned.

The General Council and the branches have no outstanding liabilities other than those regularly incurred and met during each year in carrying out their statutory duties.

The freehold property of the Council is of a highly valuable character and is sure to become still more valuable as time goes on. At present a portion of the property—namely, the house in Hanover-square—produces a yearly rent of £241 13*s.* 4*d.* When the existing lease expires, at the end of five years, there is no doubt that a considerably larger rent will be obtained.

The annual charges involved are: (1) a sum of £720 payable as interest at 3 per cent. to the English Branch; and (2) a sum of £215 payable to the sinking fund, by means of which the mortgage on the property will be paid off in 1949.

Of this annual outlay of £935 the increased rent soon to be obtained will provide a considerable proportion. The General Council may therefore look forward in a few years to holding its handsome property at a comparatively small annual charge.

The English and Scottish Branches and the Dental Fund possess the following funds in consols—viz., English Branch, £10,573; Scottish Branch, £5260; Dental Fund, £7940—which are sufficient to enable them to meet any liabilities they are likely to incur. The capital of the Irish Branch at the close of 1899 amounted to only £62, which in all probability will shortly be exhausted.

With regard to the second clause of the resolution—"(2) The relations of the income and expenditure of the Council and its branches for the last ten years"—the income of the General Council consists (*a*) of the rent of the house in Hanover-square, mentioned above; (*b*) of the proceeds of the sale of Registers, which do not nearly cover the cost of printing; (*c*) of the fees for registering colonial and foreign qualifications, which amount to about £40 a year; and (*d*) of the proceeds of the sale of the Pharmacopœia and the Addendum, 1900, which in future will be entered in a separate account. Its income, therefore, apart from the contributions of branches, is small in relation to its expenditure.

It will be convenient if each branch is considered separately, and if the expenditure is also considered under the two heads of (i.) contribution to General Council, (ii.) expenses of administration of branch office.

As to the English Branch. The income is practically stationary, the average being £4,667.

Expenditure.—(i.) The requisitions of the General Council have increased; the average of the first three years of the decade is £2800, while the average for the whole period is £3800, and the contribution in 1897 reached £5000. This was due to expenses in connexion with the

Pharmacopœia, 1898, the late Registrar's retiring honorarium, heavy law expenses, and interest on the increased mortgage. These are matters over which the branch has no direct control and the question of the expenses of the General Council will be discussed under Clause (3) of the reference to the committee.

(ii.) The expenses of the administration of the English Branch average £889, being 19·06 per cent. of the income, and the cost of administration per head of registered practitioners belonging to the branch is 10·35d. This is somewhat higher than the proportional cost of administration in Scotland, but is accounted for by the fact, first, that an election of Direct Representatives costs over £400 in England as against about £50 in Scotland; and, secondly, that a by-election (in 1897) is included; while the branch contributed one-third of the retiring honorarium to the late Registrar, in addition to what it contributed *pro rata* to the expenses of the General Council, in which the remaining two-thirds of the honorarium were included. The following table shows how these items affect the results:—

Total expenses for the 10 years		£8399	16 3
Less election expenses, 1891 ...	£489		
" " 1896 ...	404		
" " 1897 ...	426		
One-third of honorarium	330		
		1649	0 0
		£7250	16 3

Corrected percentage of expenses to income, 15·5.

As to the Scottish Branch. The income here, too, is almost stationary, the average being £2647.

Expenditure.—(i.) Here again the demands of the General Council are the chief item. Under this head the average contribution for the first three years of the decade is £1700, and for the whole period it is £2200.

(ii.) The expenses are moderate: the average is £380, being 13·63 per cent. of the income, which is 1·87 less than that of the English Branch, taking the latter at its corrected rate.

As to the Irish Branch. The income, the average of which is £820, has diminished by the interest which used to be received on consols, this asset having now been realised to meet current expenses; but apart from this there does not appear to be any serious diminution in the annual amount of fees received; indeed, 1899 showed a distinct advance over the two previous years, and this is being maintained during the present year.

Expenditure.—(i.) With an income of £820, of which the General Council requires 81·78 per cent., the residue in the hands of the branch does not suffice to meet its necessary expenses.

(ii.) The percentage of expenses to income (40·85) is higher than in the other two branches, but it must be remembered that there are certain expenses which cannot be cut down below a certain minimum, e.g., salaries and office rent. It is necessary to have an office and also to pay a salary to the registrar and clerk, so that it cannot be said that there has been an excessive expenditure in this branch. The fact, however, remains that the branch can only carry on its statutory duties this year by the aid of the special grant of £300 made to it by the Council. This will have to come as part of the Council's expenditure, out of the funds of all the branches, including the Irish Branch, so that the net gain to the Irish Branch will be only about £100 (since the General Council requires about 80 per cent. of the gross receipts of each branch). This is doubtless a very cumbersome procedure, but in view of the provisions of Section XIII. of the Medical Act, 1858, it is the only course which the statute allows.

In considering Clause (3) of the original resolution—

"(3) The measures that appear to be desirable to place the Council's finances on a satisfactory basis"—

it will be best to take the accounts of the General and Branch Councils as a whole as they appear on pp. 10-11 of App. I., Minutes of the Council, Vol. XXXVII.

A reference to the finance reports from 1890 to 1899 shows that during the last ten years the aggregate expenditure of the General and Branch Councils has exceeded the income, including the receipts from the Pharmacopœia, on the average by about £110 a year. The difference between this amount and that of £88 6s. 2d. on the first table is due to the fact that the first yearly payment to the sinking fund (£215 12s 6d) was not included, as it should have been, in the year's expenses of the General Council, and accordingly the branches were not called upon to pay their proportionate share of it. Had the Pharmacopœia accounts been eliminated, as will in future be done, the excess of expenditure over income would have averaged £232 a year. It is, however, right to say that the ratio of expenditure to income has increased during the latter part of the decade.

It must not be forgotten that a new cycle of inspection of examinations is about to commence and that next year there will be elections of Direct Representatives in England, Scotland, and Ireland, the aggregate cost of which in 1896 was £488.

With regard to the receipts, it will be seen that the great bulk of the income is derived from original registration fees, the other items being of much smaller importance.

The largest item of expenditure is the cost of the sessions of the General Council, which during the last five years has averaged £3317 4s. 4d., while the length of each session during that period has averaged seven and three-quarter days.

Since the passing of the Medical Act, 1858, in which a fee not exceeding £5 was prescribed as the registration fee, Parliament has added eight members to the Council - five members elected by the profession in the three divisions of the United Kingdom (in accordance with the provisions of the Medical Act, 1886), one each for two new universities—viz., the Victoria University and the University of Birmingham in its special Act passed this year - and two additional members for the Scottish Universities, which have now each a representative. On the other hand, the Crown is represented by five members instead of six and the President is now elected from the members of the Council. The net addition to the number of the Council is therefore seven members.

The addition of these members has necessarily imposed on the Council additional charges since the maximum registration fee was fixed by Parliament.

Of late years the amount of legal business has greatly increased and the sum of £667 has been spent since January, 1897, in connexion with prosecutions and cases before the courts alone. Also, reports of committees continue to increase in number and the conduct and record of their proceedings have of late greatly added to the cost of the item of printing.

The analysis of the accounts of the Council now presented by the committee does not appear to furnish ground for any serious anxiety as to the financial position at the present time.

It must, however, be remembered that year by year the duties which the Council is called upon to perform increase and that in consequence a longer time is required for the transaction of its business than was usually sufficient a few years ago.

The addition to the number of its members already referred to also increases its expenses during its session, the increase for each week of the sitting amounting to about £337, or at least £674 for a year containing two sessions of a week each.

The committee would therefore suggest to the Council that in order to diminish, if possible, these sessional expenses the sittings of the Council should open on the Monday instead of on the Tuesday as at present, and that the consideration of penal business should commence on Tuesday instead of on Thursday. The Executive Committee would then meet on the previous Saturday. Time would also be gained were the Council to commence its business at 1 P.M. on each day of the session.

Unnecessary expense would also be avoided were it arranged that a Direct Representative elected at a by-election should vacate his seat at a general election, so as to prevent the possibility of having an election in three years out of five, as might easily be the case in England.

Recommendations.—The committee suggest that the following be submitted to the Council for its decision:—That the Executive Committee be authorised to amend the Standing Orders as follows: (i.) that the sessions of the General Council commence on the Monday; (ii.) that a meeting of the Executive Committee be held on the Saturday immediately preceding; (iii.) that the sittings of the Council commence each day at 1 P.M.

Mr. BRYANT, in submitting this report and in moving that it be received and entered on the minutes, said that he did not think that the Council would expect him to go into details about it. One of the most striking facts it showed was that the Medical Council were not in so desperate a condition as some persons imagined that they were. The Council certainly spent a little more than their income, but, after all, the sum so expended was a small one. Last year the balance on the wrong side was only £88 6s. 2d., but when the bank account was looked at it was seen that there were so many thousand pounds to the Council's credit that it would take many years to eat up the sum if the excess of expenditure did not exceed £88 a year. Consequently, a slight sacrifice in the way of extra expenditure could be made, even in present circumstances, without detriment to the soundness of the Council's finances. He did not need to go into the question of the Irish Branch Council's position. The Finance Committee and the General Council had found a means of letting the Irish Branch go on on a basis that would not be described as unsatisfactory to the profession. The sum at which their freehold property was valued was not at all a bad sum, and they were paying off the debt in such a way that in the year 1949 the Council would not only have at its credit property amounting in value to over £25 000, but would be the better annually of the £1000 which they had now to pay for interest and instalments for the buildings which the General Council occupied and possessed. These buildings included a house in Hanover-square, and not long ago they had had a very handsome offer for it, which included the exclusion of a 20-feet strip of ground on which the Council's present premises in Oxford street could be extended. He did not say that an equal offer would at any time in the future be made to them, but if ever the house were sold the Council would get a nice round sum for the property. Having directed particular attention to the paragraph in the report which shows that the funds have to bear the expense of seven members of Council additional to the number provided for in the Act of 1858, he asked the Council to adopt the committee's recommendations appended to their report.

Sir DYCE DUCKWORTH seconded, and the report was then received and entered on the minutes.

Mr. HORSLEY moved that the Special Committee be reappointed, that the report be remitted back to them, and that they be instructed to further consider and report upon the several heads of the resolution submitted to them in May of last year. He urged that the committee presenting the report which was now before the Council had not fulfilled the duties entrusted to them. Their report under the first two heads was gravely misleading, and he submitted that they had made no recommendation whatever under the third reference. The report was optimistic in its character, but its recommendations consisted of only three small domestic economies. It was said that there was money in the bank. He protested against the assumption that the General Council were justified in embarking on over-expenditure simply because there was money in the bank.

As a matter of fact the General Council had no money in the bank. The branches had money there, but the General Council were nearly as poor as the Irish Branch Council. Practically, they were bankrupt. The branches had a certain amount of property in their hands which they had no right to hold. Members of the Council considered that satisfactory. He did not. The General Council as a council had no funds of its own. Their treasurers had the idea that because some of the branches had money the General Council were justified in spending to the last penny. That was not the rule in ordinary life. He held now, as he had held in previous sessions, that the only satisfactory way of dealing with the finance of the General Medical Council was to obtain an amendment of the Medical Act. With reference to the last paragraph of the report he wished to say that he was the unfortunate individual that was selected at a bye-election. In respect to that he would invite the members of the Special Finance Committee to refer to his address to the electors, for in that he set it forth to the profession that "they would be taxed in this particular way," but that he intended to resign his seat when his colleagues resigned their seats. This paragraph was the most humorous part of the committee's report.

The PRESIDENT said that one reason why the paragraph referred to was inserted in the report was on account of the very example Mr. Horsley had told them to take and they had taken it not as an example to Mr. Horsley but to others. Therefore the committee had given Mr. Horsley the credit.

Mr. HORSLEY: But my name does not come in. I do not see where the credit comes in. The reference to him in this report, he went on to say, was really a ridiculous one, and it seemed absurd that a committee of this importance should put it into their report. However, what he asserted was that the only satisfactory method of putting the General Medical Council's finances on a proper basis was to provide that all funds should be put into a central office, that all the expenses of the branch offices should be managed on ordinary financial lines, and that that could only be effected by securing an amendment of the Medical Act.

Mr. TOMES seconded the motion. He did not think that members realised the fact that their average deficit for the last three years was £1800 a year. He was desirous of remitting this report back to the committee because there was no time to thrash it out this session and because he did not think that the question had been fully met. He was quite prepared to say that it was nobody's fault and that because their accounts were a sham it was owing to the Act of Parliament; but he must contend that the relations of the Branch Councils to the General Council brought out the most ridiculous results.

Sir WILLIAM THOMSON moved the closure.

Dr. BRUCE thought the matter might stand over till next session.

Sir CHRISTOPHER NIXON intimated that he wanted to speak on the report now.

Dr. MACALISTER said that the report had been misconstrued.

The PRESIDENT declined to accept the motion for the closure, at the same time expressing an opinion that further consideration of the report might very properly be held over till next session.

Sir CHRISTOPHER NIXON, who was allowed to proceed, stated to the Council that their legal adviser had shown that the Council were in an illegal position as regards their finances and that they had been advised to get an amendment of the Medical Acts in order to get out of it. It was right that the Council should endeavour to get out of it by an amendment of the Acts, and in his view the only plan that would be satisfactory would be to give all the assets to the General Council and let that Council meet the expenses of the branch councils.

Considerable impatience was shown by the comparatively few members (13 out of 31) who still remained in the Council Chamber at any desire to prolong the sitting or the debate, but the PRESIDENT pointed out that it would not be well if after the opposition speeches the Special Committee had no opportunity to reply, and when another member rose to speak he called upon the chairman of the Business Committee.

Dr. MACALISTER thereupon said that it was impossible to discuss the matter at great length but he wished to say something in reply to what had been said. As a member of the Special Committee he must say that when he entered on the investigation he knew nothing about the Council's accounts and he had taken a much more serious view of his responsibility than Mr. Horsley or Sir Christopher Nixon appeared to think. He thought the question was whether the Council were in a sound financial condition and he had addressed himself to that rather than to mere matters of detail which did not seem to be of the slightest use if any proper elucidation of the question was to be obtained. Mr. Horsley had confused two things—accounts and finance. The report presented showed that the finances of the General Council and its branches were in a position which did not call for any anxiety whatever. The accounts, owing to the serious defects of the Act, were no doubt complicated, but to anyone of ordinary intelligence they were not at all difficult to understand. He had mastered the principle of them in from 15 to 30 minutes. With regard to the alleged illegality of the Council's position Sir Christopher Nixon had absolutely misread the Council's legal adviser's opinion. The very fact that the Council were advised to apply for a new Act showed that they were doing what the law asked from them. If they had been doing anything illegal their legal adviser would have said "stop." They were hampered and tied by an Act of Parliament and they must stick to it. That was not wrong. Was it more important to ascertain whether there was plenty of money to let the Council do their work or simplify the accounts? The investigation which had been made showed that if the Council analysed the finances it would be found that they were sound and that with the very small economies recommended they could meet the expenditure by the income except to a very small extent. If there was a good ground for bringing in a new Act, that might afford a good ground for a clause to amend the Council's financial machinery, but there was no justification for getting an Act to simplify the accounts. If the recommendations of the committee were adopted there would be a saving in expenditure of from £300 to £400 per year, and then there would be plenty of money forthcoming to carry on the Council's work. The Council, it was true, had very little income at present, but for whatever it wanted it could apply to the Branch Councils and get it, so that if in one year there was a certain "excess of expenditure" in its accounts, in the following year there would be an "excess of income," and so things were balanced. As a member of the committee he had to say that it was impossible to do more than had been done, and if Mr. Horsley's proposal were adopted he for one would have nothing more to do with the inquiry.

Dr. PETTIGREW, seconded by Dr. MCVAIL, moved the adjournment of the discussion till next session.

Sir DYCE DUCKWORTH said that the committee had done their best and he also declined to proceed further with the inquiry.

Mr. BRYANT concurred. To his mind it would be useless to send the report back.

The PRESIDENT pointed out that what the committee had brought before the Council was that it had in its own power an opportunity of diminishing its expenditure by adopting the recommendations which the committee had made, but the Council did not have it within its power to pass an Act of Parliament, and that was the most difficult thing they could attempt to secure. His experience was that it was practically impossible to pass any Act of Parliament on a medical subject through the Houses of Parliament; there was no subject the Governments fought more shy of than a medical one. What the Council had to consider now was whether it was not worth their while to adopt the recommendations of the committee with which the report concluded.

Dr. MCVAIL objected to adopt such recommendations and wanted the discussion adjourned. The recommendations meant much more than finance. They contemplated, for one thing, a change in their existing times and hours of meeting which would be most inconvenient if given effect to. The present arrangement was trying enough. Four-hour sittings after committees were quite sufficient when every member had to be in his place continuously. Parliament might have longer hours, with its library, reading-room, smoking-rooms, and lobbies, and an almost complete disregard of attendance in the House itself, but it was different in the Medical Council, where a member taking his seat for the day had to remain in it practically without interruption for four hours.

Mr. HORSLEY also desired to support the adjournment

because he wished an opportunity to expose the unconscious misrepresentations of Dr. MacAlister.

After some further discussion Dr. Pettigrew's motion was unanimously carried (at the time it was put only 13 members remained), and the treasurers (who accepted the responsibility) were asked to secure before next session an investigation of the Council's finances and accounts with special reference to the matters included in the reference to the Special Finance Committee.

Length of Sitting.

A proposal that the Council should sit six hours a day instead of the present four, which had been given notice of by Sir John Batty Tuke, was dropped.

Sir DYCE DUCKWORTH said that the Council had sat six hours extra this session. That meant an additional day and a half added to the eight days of regular four-hours' sittings and he hoped the fact would be recognised. He considered it exceedingly bad and exceedingly unwholesome in their present chamber to go beyond the regular hours, as he did not think any good work was done and that the work done in regular hours was best.

Midwives Bill.

On the motion of Dr. MACALISTER the following report from the Midwives Bill Committee was received and entered on the minutes, and the recommendation contained in it was adopted.

The committee has considered the following letter—remitted to the committee by the Executive Committee—received from the Coroners' Society of England and Wales, bearing on the proposed legislation for midwives:—

20, Lupus-street, London, S.W., June 15th, 1900.

SIR,—I beg to inform you that at the last annual general meeting of this society (which numbers 263 members), held on the 31st ultimo, a discussion arose upon the Midwives Bill, and eventually the following resolution was unanimously passed, namely:—

"That this society, although approving of the principle of the licensing of midwives, is of opinion that the Bill now before Parliament does not provide for the adequate control and supervision of midwives."

I am, Sirs, yours faithfully,
A. BRAXTON HICKS,
Honorary Secretary, &c.

The Registrar,
General Medical Council.

It was resolved to report this letter to the Council and to recommend that it be sent to the Lord President of the Privy Council with a request that it be taken into consideration by him.

The Medical Register.

The following notice of motion by Mr. BROWN was on the programme of business:—

That a supplementary Register be published as soon as possible after June 30th in each year, giving a list of names of persons removed from the Register since the preceding Jan. 1st, through death or otherwise, and also a list of names of persons added to the Register during the same period.

When this notice of motion was reached there was barely a quorum of members present, and on Mr. Brown's saying that he would proceed with it if it were allowed to pass without opposition some derisive sounds by which he was assailed had the effect of causing the postponement of the proposal meantime.

Exceptional Cases of Registration.

The Council proceeded to the

Consideration of an application for registration of Mr. Leonard George Boor, Lic. Soc. Apoth. Lond. 1851, Mem. R. Coll. Surg. Eng. 1852, a medical practitioner entitled to be registered under the Medical Act, 1858, but who neglected to effect such registration until after the coming into the operation of the Medical Act, 1886. This application, it was stated, was duly considered by the English Branch Council on Nov. 20th, when the following resolution was passed: "That the General Council be recommended by the Branch Council to direct the registration of Mr. Leonard George Boor."

On the motion of Sir DYCE DUCKWORTH, seconded by Dr. MACALISTER, the Council agreed to the recommendation of the Branch Council.

Sir DYCE DUCKWORTH submitted the usual report from the Examination Committee in respect to the manner in which exceptional cases of students' registration had been dealt with. It contained, he said, no special cases to call attention to.

This report was adopted.

Vote of Thanks to the President.

With a vote of thanks to the President, moved by Dr. GLOVER and seconded by Dr. WINDLE (Birmingham), the seventieth session of the Council was then brought to a close.

Medical News.

UNIVERSITY OF LONDON.—At the M.B. examination for honours held in October the following candidates were successful:—

Medicine.—First Class: Edward Alfred Gates, St. Thomas's Hospital; Olive McDougall (gold medal), London School of Medicine and Royal Free Hospital; and Donald Johnstone McGavin (scholarship and gold medal), Mason College and Queen's and General Hospitals, Birmingham. *Second Class:* Louisa Hamilton, Royal Free Hospital; Mary Hannah Frances Ivens, London School of Medicine and Royal Free Hospital; William Henry Willcox, B.Sc., St. Mary's Hospital; and Louisa Woodcock, London School of Medicine and Royal Free Hospital. *Third Class:* William Fielding Addey, University College; William Payne, Westminster Hospital; and Alfred Bertram Soltau, London Hospital.

Obstetric Medicine.—First Class: Mary Hannah Frances (scholarship and gold medal), London School of Medicine and Royal Free Hospital; Donald Johnstone McGavin (gold medal), Mason College and Queen's and General Hospitals, Birmingham; and Alfred Bertram Soltau, London Hospital. *Second Class:* Louisa Hamilton, Royal Free Hospital. *Third Class:* Eugene Michael Niall, St. Bartholomew's Hospital; Miles Harris Phillips, University College and Royal Infirmary, Bristol; William Henry Willcox, B.Sc., St. Mary's Hospital; and Florence Elizabeth Willey, B.Sc., London School of Medicine and Royal Free Hospital.

Forensic Medicine.—First Class: William Henry Willcox, B.Sc. (scholarship and gold medal), St. Mary's Hospital.—*Second Class:* Margaret Bernard Dobson, London School of Medicine and Royal Free Hospital.—*Third Class:* Wilfrid Henry Coltart, Mason College; William Gough, B.Sc., Yorkshire College; Mary Hannah Frances Ivens, London School of Medicine and Royal Free Hospital; John Wishart Little, St. Thomas's Hospital; and Alfred Bertram Soltau, London Hospital.

N.B.—The foregoing list, published for the convenience of candidates, is provisional only, and is not final until the reports of the examiners shall have been confirmed by the Senate.

OPENING OF THE NEW WING OF THE STOCKPORT INFIRMARY.—The new wing of the Stockport Infirmary, which was built in commemoration of the sixtieth year of the reign of Her Majesty Queen Victoria, was opened on Nov. 28th by Lord Newton and dedicated by the Lord Bishop of Chester. A large number of persons, including representatives of public bodies, were present. The Stockport Infirmary dates from the year 1792, when a dispensary for the treatment of the sick poor was started in Millgate by a Mr. Briscall, who was then a surgeon practising in the town. In 1832 the building was called the Infirmary and was rebuilt. It was enlarged in 1871, re-arranged in 1885, and finally further enlarged by the wing just opened. This includes wards, a mortuary and laundry, bathrooms, patients' day-rooms, and an operating theatre fitted up in the most modern style. The heating is done by hot water, and the lighting is electric. The total cost was about £12,000.

THE ALFRED HUGHES MEMORIAL.—On Nov. 24th a meeting of medical men was held in the Library, University College, Cardiff, to consider the exact form which a memorial to the late Professor A. W. Hughes should take. Dr. W. T. Edwards, Vice-President of the College, occupied the chair. On the proposition of Dr. Isambard Owen it was unanimously resolved that a medal should be founded and awarded annually in the medical school of the college and that a fund should be raised to endow the anatomical museum, which owes its origin to a gift of £350 from Professor Hughes. Since, in addition to the great services which he rendered to medical education in Wales, Professor Hughes lost his life in the discharge of what he considered a public duty, it was felt that not only his friends, but all patriotic countrymen, would take pleasure in assisting to establish such a suitable memorial. The coöperation and support of all patriotic Welshmen as well as of personal friends are therefore being invited, and the proceedings of a meeting of laymen held on the same day with the same object have already been mentioned in THE LANCET of Dec. 8th (p. 1687). The committee hopes to raise a fund of from £1000 to £1500, the interest upon which will be devoted annually to the advancement of the museum, henceforth to be known as the "Alfred Hughes Anatomical Museum." Mr. J. Lynn Thomas, formerly senior surgeon to the Welsh Hospital, South Africa, Mr. D. W. Evans, honorary local secretary to the same hospital, and Mr. J. Austin Jenkins, registrar of the University College, have been appointed honorary secretaries to the Memorial committee and his worship the Mayor of Cardiff is the honorary treasurer. A sum of £400 has already been promised.

TYPHOID FEVER AT PLYMOUTH.—76 cases of typhoid fever have been notified in Plymouth up to Dec. 10th, with nine deaths. The mortality-rate amongst the patients treated at the Borough Hospital has been only 4 per cent.

VACCINATION GRANT.—Mr. Arthur G. B. Lory, L.S.A., public vaccinator of the Chudleigh District of the Newton Abbot Union, has obtained the special Government grant for successful vaccination.

UNIVERSITY OF CAMBRIDGE.—Dr. B. Anningson, Dr. W. Collingridge, Dr. J. F. W. Tatham, and Professor Sims Woodhead have been appointed examiners for the Diploma in Public Health; Professor A. Macalister and Dr. S. H. Habershon additional examiners for the Second and the Third M.B. examinations respectively. The Walsingham medals for biological (including physiological) research have been awarded to Mr. H. H. Dale (gold medal) and Mr. R. C. Punnett (bronze medal).

THE LATE DR. J. I. BEVAN.—Dr. John Iron Bevan of Mumbles, Glamorganshire, died in London on Nov. 30th, in his fifty-second year, after having undergone a surgical operation. Dr. Bevan, who graduated at Edinburgh University in 1872, had been for many years in practice at Mumbles, where he held several public appointments, being medical officer of health of Oystermouth and district medical officer and public vaccinator for the East Division of the Gower Union. He was also surgeon to the Fourth Division of the Coast Brigade of the Royal Artillery.

THE SURGICAL AID SOCIETY.—On Dec. 10th the Lord Mayor of London presided at the annual meeting of the Surgical Aid Society which was held at the Cannon-street Hotel. The report showed that the net income for the year was £17,000 and the subscriptions were £8942. The expenditure had been £14,695. A munificent bequest of £20,614 had been received under the will of the late Mr. Edward Mackeson of Hyde Park-square and the City guilds had supported the society liberally. During the year 25,219 appliances had been supplied.

FATAL ACCIDENT TO A MEDICAL MAN.—Mr. Edwin Thomas Griffiths, M.D. St. And., J.P., aged 77 years, of Washwood, near Birmingham, died from the effects of a fall on Nov. 27th. At the inquest it was stated that the unfortunate gentleman whilst crossing the road was knocked down by the shaft of a cart. From a statement made by the deceased just before he died it would seem that the driver of the vehicle (who has not been found) was not to blame, and the jury found that death was accidental, the result of a fall, but that the evidence was insufficient to show how the fall was caused.

THE WEST KENT MEDICO-CHIRURGICAL SOCIETY.—Dr. Septimus Sunderland presided at a meeting of this society held at the Royal Kent Dispensary on Dec. 7th when the Purvis Oration was delivered by Dr. G. V. Poore. After the oration (an abstract of which will be found in another column of THE LANCET) a conversazione was held and the following exhibitions were given: Lantern Views of Historic Towns in Mediæval France and a demonstration of the Kromscop, by Mr. J. J. Vezey, F.R.M.S; a demonstration of Wireless Telegraphy, by Mr. Leslie Miller; an Apparatus for the Production of Electrical Currents of High Potential and Great Frequency, and the Instruments used in applying the Currents, by Dr. Pepperdene; Pathological Specimens and Microscopic Sections of Eyes, by Mr. Ernest Clarke, F.R.C.S. Eng.; and Microscopic Slides and Drawings, illustrating Pathological Conditions of Diseases of the Skin, by Dr. Morgan Dockrell.

THE WATER-SUPPLY OF LEICESTER.—A suggestion having been made as to the possibility of diphtheria being conveyed by the Leicester water-supply the sanitary committee instructed Mr. H. G. H. Monk, the medical officer of health, to investigate the matter. A sample of water taken from a tap in the town was submitted to examination with the following result:—Physical: naked-eye appearances, *nil*; colour, *nil*; suspended matter, *nil*; deposit, *nil*; microscopic appearances, *nil*; odour, *nil*; reaction, neutral; temperature, 14° C. Bacteriological: 1. Quantitative examination of micro-organisms, 20 per cubic centimetre. This was the average on four experiments. 2. Qualitative examination of micro-organisms: (1) Several common non-pathogenic water bacteria were present; (2) no bacillus coli and no bacillus typhosus were detected; and (3) no bacillus diphtheriæ was detected. Remarks: The sample was excellent in every way. The number of bacteria present was very small, indeed, after 24 hours' standing, there was no sign whatever of surface pollution and no organism of disease was detected.

NEWPORT HOSPITAL.—The total receipts of the recent bazaar given for the funds of the Newport (Mon.) Hospital amounted to £6068 and the expenses to a little over £200.

SEWAGE OF CAMELFORD.—At the Camelford (Cornwall) County Court, held on Dec. 6th, the Cornwall County Council applied for an order directing the Camelford Rural District Council to abstain from allowing the sewage of Camelford to fall into the river Camel. The judge made the order with costs.

DIPHTHERIA IN GLAMORGANSHIRE.—At the meeting of the Sanitary Committee of the Glamorganshire County Council, held on Dec. 7th, the medical officer of health (Dr. W. Williams) reported that during the three months ended September last 882 cases of diphtheria had been notified in the county of Glamorgan, against 540 in the previous quarter.

WINSFORD COTTAGE HOSPITAL.—The Winsford (Devon) Cottage Hospital, which has been given by Mrs. Medley of Winsford Tower as a memorial to her late husband, is now finished. The hospital, which contains three wards, will accommodate ten patients and is intended to benefit more particularly the poor of the parishes of Harwill and Beaworthy. The entire cost of the institution has been borne by Mrs. Medley who also intends permanently to endow the hospital.

Parliamentary Intelligence.

HOUSE OF LORDS.

MONDAY, DEC. 10TH.

Treatment of Invalided Colonial Soldiers.

EARL CARRINGTON called the attention of the Government to the practice of sending home as steerage passengers in mail steamers wounded and invalided soldiers who have been brought to this country to recruit their health, and asked whether more suitable accommodation could not be provided for these men. His lordship spoke of the men being packed like herrings in a barrel, with steerage accommodation and steerage diet, when they were not in a strong state of health, and said that the amelioration of their lot had been left to private charity and to the generosity of the steamship companies.—Lord RAGLAN, the new Under Secretary of State for War, replied on behalf of the Government. The expression "steerage," he said, was somewhat unfortunate, for the men had a third-class passage with a bunk in a cabin and a dietary that was varied and plentiful. These soldiers had been brought home as invalids from South Africa in order to relieve the pressure on the base hospitals and the convalescent homes in South Africa. Wherever possible, of course, they had been sent straight to their homes in the colonies. They were not really invalids; in far the greater majority of cases they had recovered their health and strength, and if they had not entirely recovered they were, at least, far advanced towards convalescence, and therefore it was no great hardship to ask them to travel third class. Where a man was considered to be in a delicate state of health and needing more attention and perhaps more luxury he was provided with a second-class passage. If these men, on account of their superior social position, were all to be given a second-class passage, the same reason would apply to the men of many other corps such as the Imperial Yeomanry and the City Imperial Volunteers.—Lord MONKSWELL, Lord TWEEDMOUTH, and the Earl of ABERDEEN expressed dissatisfaction and disappointment with the answer made on behalf of the Government. Lord ABERDEEN thought that the medical officers should be encouraged to ascertain the true position of affairs in order that the men themselves might not appear to be over-particular.—The Marquis of LANSDOWNE, late Secretary of State for War, insisted that the picture had been overdrawn. The accommodation given to these men was what was known as superior third class, and it was quite unfair to speak of them being packed like herrings in a barrel.—Lord STRATHCONA and MOUNT ROYAL said he had no doubt that there had been some shortcomings and he urged the Government to make further inquiry into the matter.—Earl CARRINGTON said that he had never heard of this "superior third-class" accommodation, and told the House that one man had a temperature of 104° F.; that others were in great pain from wounds; and that others again were recovering from enteric fever. He was so dissatisfied with the answer of the Government that on an early date he would move and take the sense of the House on the motion "That this House disapproves of the arrangements made by Her Majesty's Government in sending back invalided and wounded colonial soldiers."

HOUSE OF COMMONS.

FRIDAY, DEC. 7TH.

The Constituents of Beer.

Mr. FREDERICK WILSON asked the President of the Local Government Board whether he would take steps to define the word "beer," like bread,

butter, &c., or whether beer was still to be made of any imaginable article grown, manufactured, or imported into the country.—Mr. GRANT LAWSON, replying for Mr. WALTER LONG, said: Legislation would be necessary to give effect to the wishes of the hon. Member and I am afraid that I could not undertake to introduce a Bill for the purpose. I may point out that adulteration of beer may be dealt with under the existing law.

MONDAY, DEC. 10TH.

The Report of the South African Hospitals Commission.

Mr. BALFOUR, replying to a question addressed to him by Sir WALTER FOSTER, said he was informed by the South African Hospitals Commissioners that they hope to be in a position to present their report early in the ensuing year.

TUESDAY, DEC. 11TH.

Medical Colleges and the Corporation Tax.

Sir JOHN TUKE asked the Chancellor of the Exchequer whether he proposed to impose the corporation tax (1894) on the Royal Colleges of Physicians in London and Edinburgh, having regard to the fact that the two Colleges administer and regulate medical education and examination and maintain laboratories for original research, that they are consulted by Government and by municipal authorities in matters relating to public health and medical matters generally, and that each Fellow of the Colleges is required to pay a stamp duty of £25 on election as Fellow, whereas the Institution of Civil Engineers has, by a decision of the House of Lords, been exempted from payment of the corporation tax; and whether, in face of the fact that the corporation tax has never been levied, he proposed to make the Royal Colleges liable for five years of arrears, thus placing a strain on the resources of two bodies who perform the services indicated for the State.—Sir MICHAEL HICKS-BEACH replied: The question of the liability of the Royal Colleges of Physicians in London and Edinburgh to pay corporation duty was raised by the Board of Inland Revenue in 1894 and was disputed by the Colleges. It was allowed to remain in abeyance pending a decision on a similar claim made on the Royal College of Surgeons, which has since been decided in favour of the Crown by the Court of Appeal. Following this decision the Board of Inland Revenue feel compelled to press their claim on the Royal Colleges of Physicians of London and Edinburgh. The facts of the case differ from those in the case of the Institution of Civil Engineers.

Reserve Men and Medical Attendance.

Captain NORTON asked the Secretary of State for War whether it had been brought to his notice that the wives of non-commissioned officers and men in the Royal Reserve in receipt of separation allowance have been refused medical attendance for themselves and their children in cases where they do not happen to live within a mile of a military medical man or civilian practitioner in attendance on troops; and whether, seeing that reserve men came forward voluntarily at a time of national danger, are only temporarily employed, and consequently cannot conveniently alter their domestic arrangements, steps would be taken to place the families of all of them upon an equal footing as regards medical attendance, irrespectively of their abode.—Mr. POWELL WILLIAMS replied: The families of soldiers of the Royal Reserve are being treated on the same lines as those governing the medical attendance of the families of soldiers of the regular forces. The same privileges have been extended to them when separated from their husbands. It is not possible to provide medical attendance for those residing at a distance from military headquarters.

Typhoid Fever among the Troops in South Africa.

Mr. POWELL WILLIAMS, in reply to Sir WALTER FOSTER, said that the total number of cases of typhoid fever among the forces in South Africa from the beginning of the war to Sept. 28th, 1900, was 15,655, the number of deaths from that disease 3642, and the number sent home as invalids 9128.

The Beer Poisoning Cases.

Mr. BALFOUR, in reply to a question on this subject, said that he was informed by the President of the Local Government Board that his department had from the first outbreak of the epidemic had the matter under observation. One of the medical inspectors had been visiting the places affected and had been instructed to obtain all possible information on the subject, including the action that was being taken, both by those interested in implicated breweries and manufacturers of brewers' sugar and by the local authorities, for detecting arsenic in beer and other substances which contain chemically manufactured sugar. The Board were issuing circulars to local authorities recommending them to take samples, to be analysed, both of beer and articles of food in which glucose and other substitutes were used.

Medical Provision for the War in South Africa.

At this sitting of the House Mr. BRODRICK, the new Secretary of State for War, introduced in Committee of Supply a supplementary vote of £16,000,000 for the conduct of military operations in South Africa and China. Various aspects of the South African campaign were discussed, many references being made to the medical provision. With regard to the bringing home of sick and wounded Mr. Brodrick announced that he had given instructions that as many as possible should be returned in troopships and should not have to mix with other passengers, that they should be under the control of an officer who would attend to their comfort, that in any case of a man who was ill he should be returned second-class at a superior rate, and that there should be careful selection of ships. He had given instructions that all the sick and wounded, whether partially recovered or not, who had to be returned in mail-steamers should have a higher rate of accommodation.—Sir WALTER FOSTER, in the course of his speech, expressed the hope that however long the war might yet last more efficient and effective steps would be taken to preserve the health and lives of the soldiers from the attacks of disease. He commented on the prevalence of typhoid fever and said that it was mainly due to the fact that proper precautions against the disease had not been taken from the beginning of the operations. He had discussed the subject with some of the eminent surgeons who had been at the front, and they all agreed that the one great thing wanted was proper sanitation in the camps. He hoped that the Secretary of State would take into his serious consideration the advantage of following the example of other great Powers and of having attached to our army some kind of sanitary corps which would prevent a repetition of the mistakes that had been made in South Africa with regard to the sanitation of the camps. Sir Walter Foster also referred to the treatment of invalids on their way home and to the insufficient strength of the Royal Army Medical Corps. Mr. BRODRICK assured Sir Walter Foster that his suggestion about a sanitary corps would be carefully considered along with other suggestions on the same subject. He hoped that it would not be supposed that he was either temporising or endeavouring to put off a decision upon this important matter, but it was absolutely impossible at this moment for him to enter into the question of what required to be done for the medical service in South Africa. It was a subject in which he in common with every Member of the House had the deepest possible interest. They had a commission sitting, and if anything that he could do would induce that commission to report at an earlier date than it would otherwise do he would only be too pleased to do it. It was impossible that the question of the medical service could be put aside, but it could not be dealt with until they had received the report of the commission. He would ask the House to have confidence that when the report was received the action of the War Office would be prompt and that no preconceived ideas of any sort or kind would interfere with their taking whatever measures might be necessary, however drastic, to put the medical service upon a proper footing. They did not wish to prejudge the matter in the least. In a campaign of this kind there must be occasions when men received less medical assistance than was desirable. A sanitary corps to inspect each camping-ground would be an ideal state of things, but he did not think it would be possible in the case of every small camp. However, their minds were open and there was nothing either in labour or in examination which would be stinted to give proper effect to the suggestions which might be adduced.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET Office, directed to the Sub Editor, not later than 9 o'clock on the Thursday morning of each week, for publication in the next number.

ADAMS, E. G. B., M.B. Lond., F.R.C.S., has been appointed Medical Officer for No 1 B. Sanitary District by the Longport Board of Guardians and Rural District Council.

ANDERSON, D. E., M.D. Paris, has been appointed Visiting Physician to the Hertford British Hospital, Paris.

BATES T., L.R.C.P., L.R.C.S. Edin., M.R.C.S., has been re-appointed Honorary Surgeon, Worcester General Infirmary.

BATHURST, L., L.R.C.P. Lond., M.R.C.S., has been appointed District Medical Officer, Ellesmere Union, vice J. Griffiths.

BERNARD, G., M.D. Canada, L.R.C.P., L.R.C.S. Edin., has been appointed District Medical Officer, Sunderland Union.

BONNER, T. J., M.B., C.M. Aberd., has been appointed Medical Officer of Health, Towyn Urban Sanitary District, vice B. M. Bone, resigned.

BRAND, G. H., M.D. Brux., L.R.C.P., L.M. Irel., L.S.A. Lond., has been appointed to examine Candidates for the Royal Navy and Royal Marines for the Northampton District.

BRICKWELL, J., M.R.C.S., has been re-appointed Medical Officer for the Stoke Pogis Sanitary District, Eton Union.

BROWN, J. WALTER, B.A., M.B., B.Ch. Irel., has been appointed House Surgeon to the Children's Hospital, Forest House, Nottingham.

BUDD, H. G., L.R.C.P. Lond., M.R.C.S., has been re-appointed Honorary Surgeon, Worcester General Infirmary.

BYFORD, W. F., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer of Health for the Borough of Ruthin, vice D. Jones, resigned.

COOKE, R. P., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed District Medical Officer, West Bromwich Union, vice C. Lyddon, resigned.

DREW, DOUGLAS, B.S., M.D. Lond., F.R.C.S. Eng., has been appointed Surgeon to the In-patients at the Hospital for Women, Soho-square, London.

ELLIS, R. SIDNEY, M.B., Ch.B. Edin., has been appointed Resident Medical Officer to the St. Mary's Hospital for Sick Children, Plaistow, E.

ENSOR, C. A., L.R.C.P. Lond., M.R.C.S., has been appointed District and Workhouse Medical Officer, Tisbury Union, vice J. A. Ensor, deceased.

GRACE, ALFRED, L.S.A. Lond., has been appointed Deputy Medical Officer for the No 1 District and the Workhouse of the Thornbury (Gloucestershire) Union.

HADFIELD, P. HEYWOOD, L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Assistant Medical Officer of Blackadon Asylum, Devonshire.

HAWORTH, J. T., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been re-appointed Medical Officer of Health by the Filey District Council.

HILL, F. A., M.D. Brux., L.R.C.P. Lond., M.R.C.S., has been appointed District Medical Officer, Stroud Union, vice F. E. Gordon, resigned.

HOBHOUSE, EDMUND, M.D. Oxon., M.R.C.P., has been appointed Physician to the Alexandra Hospital for Children, Brighton.

HUDSON, O. H., L.R.C.P. Irel., M.R.C.S., has been appointed Medical Officer of Health for the Dronfield Urban Sanitary District, vice H. M. Richards, resigned.

HUTCHENS, HAROLD J., has been appointed Medical Officer of Health to the Joint Board for the Prevention of Epidemic Diseases, Brisbane, and to continue to act as Medical Superintendent of the Plague Hospital.

KIRK, T. D., M.D., M.Ch. Irel., has been appointed Medical Officer of Health, Montgomery Urban Sanitary District, vice T. Morgan, resigned.

MANNING, ERNEST J., M.R.C.S., L.R.C.P. Lond., M.B. Durh., has been appointed Junior Assistant House Surgeon to the Royal Devon and Exeter Hospital, Exeter.

MAPLETON, H. B., M.D. Edin., D.P.H. Lond., has been appointed Medical Officer of Health, Newton Abbot Urban Sanitary District, vice W. Harvey, resigned.

MITCHELL, C. M., M.D., M.Ch. Irel., has been appointed District Medical Officer, Oakham Union, vice G. Shields, resigned.

RANDALL, WYNDHAM, M.R.C.S., L.R.C.P. Edin., has been re-appointed Medical Officer of Health by the Penybont Rural District Council, South Wales.

ROBB, J. B. K., M.D. Aberd., has been appointed District Medical Officer, Burnley Union, vice S. Lawson, resigned.

RODERICK, SYDNEY JAMES, M.B., C.M. Edin., has been re-appointed Medical Officer of Health for the Borough of Llanelly, Carmarthenshire.

SHEAHAN, GERALD, L.R.C.P. & S. Edin., has been appointed House Surgeon to the Royal Southern Hospital, Liverpool.

SOUTHEY, A. J., M.R.C.S., has been re-appointed Medical Officer for the Colnbrook Sanitary District.

TRUMPER, W. A., M.R.C.S., L.R.C.P. Lond., has been appointed Assistant House Surgeon to the Royal Devon and Exeter Hospital, Exeter.

WARBURTON, W. P., M.D. Edin., has been appointed Medical Officer of Health, Skirlaugh Rural Sanitary District, vice C. Soloman.

WESTERMAN, ARTHUR, M.B., Ch.B. Aberd., has been appointed Senior Resident Medical Officer to the North-west London Hospital, Kentish Town-road, N.W.

WHITEHEAD, ARTHUR E., L.R.C.S., L.R.C.P. Edin., has been appointed Assistant Resident Medical Officer to the St. Mary's Hospital for Sick Children, Plaistow, E.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

ANCOATS HOSPITAL, Manchester.—Resident House Physician. Salary £80, with board, &c.

BOOTLE BOROUGH HOSPITAL, Liverpool.—Junior Resident Medical Officer. Salary £80 per annum, with board and washing.

BRIGHTON, HOVE, AND PRESTON DISPENSARY.—Three House Surgeons, one for each Branch. Salary £160 per annum, with furnished apartments, coals, gas, washing, and attendance. Apply to Assistant Secretary, 113, Queen's-road, Brighton.

CHELSEA, BROMPTON, AND BELGRAVE DISPENSARY, 41, Sloane-square, Chelsea.—Surgeon.

CHELSEA HOSPITAL FOR WOMEN, Fulham-road, S.W.—Clinical Assistant for three months. Fee £8 8s.

CHELTENHAM GENERAL HOSPITAL.—Junior House Surgeon for two years, unmarried. Salary £45 per annum, with board, lodging, and washing.

CHESTERFIELD AND NORTH DERBYSHIRE HOSPITAL AND DISPENSARY, Chesterfield.—Resident House Surgeon for two years. Salary £100 per annum, with board, apartments, and laundry.

CHESTER GENERAL INFIRMARY.—Second Resident Medical Officer for six months. Salary at the rate of £80 per annum, with residence and maintenance in the house.

COUNTY ASYLUM, Gloucester.—Junior Assistant Medical Officer, unmarried. Salary commences at £120 per annum, rising £10 yearly to £150, with board (no stimulants), lodging, and washing.

DEVON COUNTY ASYLUM, Exminster.—Junior Assistant Medical Officer. Salary £125, rising £10 annually to £155, with board, furnished apartments and washing.

DONCASTER GENERAL INFIRMARY AND DISPENSARY.—Assistant House Surgeon. Salary £40 per annum, with board and residence.

DUMFRIES AND GALLOWAY ROYAL INFIRMARY, Dumfries.—Assistant House Surgeon. Board and washing provided.

GENERAL HOSPITAL, Birmingham.—Two Casualty Assistant Physicians for one year. Salary £50 per annum.

GENERAL INFIRMARY AT GLOUCESTER AND THE GLOUCESTERSHIRE EYE INSTITUTION, Gloucester.—Assistant House Surgeon for six months. Salary at the rate of £30 per annum, with board, residence and washing.

GOWER UNION.—Medical Officer for the Eastern District of the Union. Salary £40 per annum, and the successful applicant will be appointed Public Vaccinator for the District. Subject to statutory deduction. Apply to the Clerk to the Guardians, Victoria-chambers, Oxford-street, Swansea.

GREAT NORTHERN CENTRAL HOSPITAL, Holloway-road, N.—Non-resident Assistant House Surgeon for six months. Salary at the rate of £30 per annum, with luncheon and dinner in the hospital.

HOSPITAL FOR WOMEN, Soho-square, London.—Assistant Surgeon.

HULL ROYAL INFIRMARY.—Junior Assistant House Surgeon for one year. Salary £40, with board and lodging.

LAMBETH INFIRMARY.—Clinical Assistant for six months. Salary at the rate of £50 per annum. Personal application to the Medical Superintendent.

LEEDS PUBLIC DISPENSARY.—Two Resident Medical Officers for one year. Salary £100, with board and lodging.

LEICESTER INFIRMARY.—House Physician for 12 months. Salary £100 per annum, with board, apartments, and washing.

LONDON THROAT HOSPITAL, 204, Great Portland-street.—Assistant Surgeon.

MILLER HOSPITAL and ROYAL KENT DISPENSARY, Greenwich-road, S.E.—Junior Resident Medical Officer for six months. Salary at the rate of £60 per annum, with board, attendance, and washing.

MONKWEARMOUTH AND SOUTHWICK HOSPITAL, Sunderland.—House Surgeon, unmarried. Salary £80 per annum, with board, residence, and washing.

NEWCASTLE-UPON-TYNE UNION.—Assistant Medical Officer at the Workhouse, unmarried. Salary £150 per annum, with furnished apartments, rations, and washing, subject to statutory deductions. Applications to the Clerk to the Guardians, Union Offices, Newcastle-upon-Tyne.

NORFOLK COUNTY ASYLUM, Thorpe, Norwich.—Junior Assistant Medical Officer. Salary £120, rising to £150, with board (no liquors), lodging, and washing.

NORTH STAFFORDSHIRE INFIRMARY AND EYE HOSPITAL, Hartshill, Stoke-upon-Trent.—Assistant House Surgeon for six months. Board, apartments, and washing provided, and at least £10 given as an honorarium.

NOTTINGHAM GENERAL DISPENSARY.—Assistant Resident Surgeon. Salary £140 per annum, all found except board.

ROYAL BOSCOMBE AND WEST HANTS HOSPITAL, Bournemouth.—House Surgeon. Salary £60 per annum, with board, lodging, and washing.

ROYAL COLLEGE OF PHYSICIANS, Pall Mall East, London.—Milroy Lecturer for 1902.

ROYAL HOSPITAL FOR CHILDREN AND WOMEN, Waterloo Bridge-road, London.—Assistant Surgeon.

ROYAL PORTSMOUTH, PORTSEA, AND GOSPORT HOSPITAL.—House Surgeon for one year, unmarried. Salary £100, with board and residence.

ROYAL SEA-BATHING HOSPITAL, Margate.—Assistant Resident Surgeon. Salary £52 per annum, with board and residence.

SALOP INFIRMARY, Shrewsbury.—House Surgeon. Salary £100 per annum, with board, washing, and residence.

ST. MARYLEBONE GENERAL DISPENSARY, 77, Welbeck-street, Cavendish-square, London.—Resident Medical Officer. Salary 100 guineas per annum, rising annually by 10 guineas to 120 guineas, with furnished apartments, attendance, coal, and light.

ST. PAUL'S HOSPITAL FOR SKIN AND URINARY DISEASES, Red Lion-square, London.—Honorary Assistant Surgeon.

SUSSEX COUNTY HOSPITAL, Brighton.—Second House Surgeon and Anæsthetist, unmarried. Salary £70 per annum, with board and residence in the hospital. Also a Third House Surgeon, unmarried. Salary £60 per annum, with board and residence in the hospital, and washing.

SWANSEA GENERAL AND EYE HOSPITAL.—House Physician for twelve months. Salary £75, with board, apartments, and washing.

TAUNTON AND SOMERSET HOSPITAL, Taunton.—Assistant House Surgeon for six months. Salary at the rate of £60 per annum, with board, lodging, and laundry.

TIVERTON (DEVONSHIRE) INFIRMARY AND DISPENSARY.—House Surgeon. Salary £30, and all found.

TYNEMOUTH VICTORIA JUBILEE INFIRMARY.—Resident House Surgeon. Salary £100, with board, residence, and attendance. Apply to the Secretary, 43, Howard-street, North Shields.

UNIVERSITY OF EDINBURGH.—Additional Examinerships in Medicine and Science.

VICTORIA HOSPITAL FOR CHILDREN, Queen's-road, Chelsea.—House Surgeon for six months. Honorarium £25, with board and lodging in the hospital.

WARRINGTON INFIRMARY AND DISPENSARY.—Junior Resident House Surgeon. Salary £100 per annum, with furnished residence and board.

WESTERN GENERAL DISPENSARY, Marylebone-road, London.—Two Honorary Surgeons.

WEST DERBY UNION.—Resident Assistant Medical Officer for one year, at Mill-road Infirmary, Everton, Liverpool, unmarried. Salary £100, with rations. Subject to statutory deduction, Apply to the Clerk to the Guardians, Brougham Terrace, Liverpool.

WEST KENT GENERAL HOSPITAL, Maidstone.—House Surgeon, unmarried. Salary 100 guineas, rising 10 per annum to 120 guineas, with board and residence. Also Assistant House Surgeon for six months. Honorarium at the rate of £50 per annum, with board and residence.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL, Wolverhampton.—Assistant House Surgeon for six months. Honorarium at the rate of £75 per annum will be given. Board, lodging, and washing provided.

Births, Marriages, and Deaths.

BIRTHS.

CARRUTHERS.—On Dec. 9th, at Riverside, Batheaston, the wife of Alan Eskrigge Carruthers, M.A., M.B. Cantab., of a son.

COLLINS.—On Dec. 1st, at The Mall, Wanstead, Essex, the wife of George W. Collins, M.R.C.S. Eng., L.R.C.P. Lond., of a son.

JAMES.—On Dec. 6th, at Sunnyholme, East Cowes, Isle of Wight, the wife of Captain S. P. James, I.M.S., M.B. Lond., of a daughter.

MUNRO.—On Dec. 4th, at Sweetbriar Cottage, Nantwich, the wife of John Douglas Munro, M.D., of a daughter.

WEICHERT.—On Dec. 9th, at Rydal Mount, Penygraig, Glamorgan, Constance, wife of C. J. Weichert, M.R.C.S., L.R.C.P. Lond., of a daughter.

MARRIAGES.

HILLIARD—HAZELL.—On Dec. 8th, at St. George's, Bloomsbury, Harvey Hilliard, M.R.C.S., L.R.C.P. Lond., of Wilton-place, S.W., to Charlotte Rippon, younger daughter of Walter Hazell, of Russell-square, London.

PERRY—GORDON.—On the 19th Nov., 1900, at Agra, India, Francis Frederic Perry, F.R.C.S., Lieutenant-Colonel Indian Medical Service, to Hilda Madeleine, daughter of D. Clunes Gordon, Esq.

WARING—HILL.—On Dec. 10th, at St. George's Church, Campden-Hill, W., Holburt J. Waring, M.S., B.Sc., F.R.C.S., of Upper Wimpole-street, W., to Annie Cassandra, daughter of the late Charles Johnston Hill, of Holland-park, W.

DEATHS.

SMITH.—On Dec. 6th, at his residence, 23, Park-road, Plumstead, John Smith, M.R.C.S. Eng., L.S.A. Lond., aged 59 years.

TERRY.—On Nov. 24th, 1900, at Daventry, May, wife of John Terry, L.R.C.P. Lond., M.R.C.S. Eng. Also on Dec. 2nd, 1900, at Reading, John William, son of the above, aged 20 days.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

"THE MEDICAL PROVIDENT LEAGUE."

To the Editors of THE LANCET.

SIRS,—Confidently relying upon the motto which THE LANCET has so well upheld during its distinguished career, "Audi alteram partem," I would submit that there is another side to the arguments advanced in your issue of Dec. 1st (p. 1629) concerning the Medical Provident League. In the first place, and with reference to your statements concerning the National Deposit Friendly Society, you note that that society "is sincerely desirous to receive the active support and confidence of the medical profession." You doubtless approve of that desire, for THE LANCET has often and conclusively demonstrated how painfully different is the attitude assumed towards the profession by other provident societies. Yet you paraphrase that desire to mean—"in other words, the National Deposit Friendly Society will be much obliged if medical men will combine together to act as canvassers for the society." May I point out that the interpretation is scarcely logical, and as the honorary consulting physician for the London division of the society I am able to say that it is totally inaccurate. The society has never expected, nor does it desire, medical men to canvass for it. The society would be glad to have an organised medical body to deal with, through which any suggestions which may be advanced, perhaps any complaints which may be needed, from its medical officers all over the country might be brought directly and officially to the governing body of the society; instead of vague opinions filtered through official after official from one district, and often flatly opposed to equally vague opinions expressed from some other town. The society, in fact, desires to work in perfect harmony with the medical men who work for it; and it is indisputable that this would be assisted by official communication between bodies representative of both parties. I venture, therefore, to submit that, instead of being adversely criticised, the society deserves the greatest credit for attempting to obviate by such friendly understanding any chance of the friction and the misunderstandings which are so rife between other provident bodies and their medical officers; for assisting, in fact, to institute a most practical conciliation scheme for its own workers—the very system which THE LANCET has so eloquently advocated, which medical authorities have approved, but which seems at present unlikely to be generally adopted.

Permit me to point out that you are in error about the insurance scheme of the society. It was sanctioned last May; it has a *clientèle*, to commence with, of 56,000 members; it is only waiting for Jan. 1st to formally commence its work. I must enter a very respectful protest against your description of local secretaries of the new League as "touts." Their duties would be to work for the objects of their professional association exactly as many now work in every district for the British Medical Association or the Medical Benevolent Fund. By parity of argument the latter gentlemen are "touts"—a description which I can quite imagine they might fairly disapprove of. Finally, you advise the National Deposit Friendly Society that "it should coöpt as acting members of its general committee representatives chosen by several hundreds of the medical practitioners" who now work for the society. That is precisely the very thing the society has offered to do. But it not unnaturally asks for a representative medical body to nominate those representatives. It will scarcely be suggested that the society should ask some 1500 practitioners to meet in a casual way, in some place of assembly, somewhere, for the sole purpose of choosing representatives on the governing body of the society; or that it would be humanly possible, without an enormous expenditure of time, trouble, and money, for candidates to be selected, and representatives finally chosen, merely by correspondence with 1500 busy men.

Will you next permit me, Sirs, to point out that this friendly society is distinguished from others by certain remarkable features. It has no contract work. It pays practitioners promptly for every attendance on its members, on a scale of fees drawn up and agreed to by, and modified from time to time at the desire of, medical practitioners. It is in no sense a commercial undertaking striving for the profit of shareholders, but a mutual benefit society for the working classes. By general acknowledgment, the society treats its medical officers with courtesy and respect. It is extending with such great rapidity amongst the working classes in this country that it is safe to predict that at no distant period it will be one of the foremost friendly societies in the United Kingdom. Of its own free will—merely to prevent friction and misunderstandings, merely in order to work with the medical profession in the future, as in the past, with harmony and mutual good feeling—the society has offered to do all in its power to welcome, and to officially recognise, an organisation of medical men willing to work for its members.

So far as the Medical Provident League—now definitely formed—is concerned, its position is equally defined. Quite independently of this friendly society, or of any other, the League proposes to devote its energies to work for reforms which none have proved more conclusively than THE LANCET are most urgently needed for the welfare of general practitioners and for the good name of the medical profession.

I am, Sirs, your obedient servant,

Upper Wimpole-street, W., Dec. 4th, 1900. BEDFORD FENWICK.

To the Editors of THE LANCET.

SIRS,—I read the most extraordinary circular which appears in THE LANCET of Dec. 1st (p. 1629), referring to the above society, and think that in your strictures on it you have just hit the right nail on the head. You pick out the two weakest points—I quote your words: "Rate of remuneration for medical service and the wage limit above which medical service cannot be rendered; there are other things which might be discussed." A few years back I was called on by an agent of the above society, shown the rules, told that other medical men in the town would act for it and accept the rate of payment, and assured that this was no common club, that while working-men would be admitted it was for a class above that; the names of several prominent well-to-do business men, each employing a considerable number of hands in the place, were mentioned to me as members, and I was asked would I act for it and accept the stipulated rate of payment. I declined, pointing out my reasons to some of my opponents, but failed to convince them, and the society got a footing here. Now, I am trusting to my memory, which is fairly good, but if I am wrong I will gladly admit it, and some of the rules may have been altered since then, yet, if you allow me the space—and I feel sure in the interest of the battle with the clubs, you will—I will point out the weak points of this society's rules and actions. A handbill was issued, which I sent you at the time, calling a meeting; a baronet was to take the chair, members were invited to join, and it was specially stated in this printed issue that position in life would be no bar to membership. The rules stated that for the fee of 1s. a member would be passed by the medical officer (and not only passed, but he had to be classified in a certain category according to his state of health at the time, all for 1s.); a fee of 2s. 6d. (two shillings and sixpence) would be paid for visit and medicine to last two days. I could see no provision for payment of visits at night or those required at times oftener than once in two days. I was told, when I pointed out that there was no wage-limit, that higher fees would be paid for those who join for higher sick pay, but my experience has been that very many of the better class who join this society and other clubs want the doctors cheap and do not pay to these societies at such a rate as to bring in to the medical attendant a remuneration in any proportion to his services and their own income. As an illustration, I was once asked, earlier than the establishment here of the National Provident, to allow the "honorary" members of the Rechabites to be placed on my list with the ordinary members and attend them for the club fees paid for the latter. I need not say that I declined to accept this but their names were mentioned to me and these were in most instances those of the very men whom I objected to as joining the National Provident; they were still bent on getting a cheap medical attendant—thrifty to meanness. If the National Provident and other benefit societies would only stick to the working and keep out the middle classes they would find it best for their own interests. We have now established a strong union in this and an adjacent county, taking in those medical men living on the borders of another as well, and hope to do good service in weeding out "sweating" by medical aid and other kindred institutions and level up to a higher plane contract work. Thanking you in anticipation,

I am, Sirs, yours faithfully,

Eckington, Derbyshire, Dec. 1st, 1900. WALLACE B. CROSKERY.

THE YOUNG LADIES' SCHOOL OF ARTS.

A CORRESPONDENT sends us a page cut from a little book with the above title printed presumably about the end of the last century and bearing internal evidence of being the composition of a Scots-man or -woman. The page contains recipes or prescriptions which would be considered scarcely suitable nowadays for the perusal of "sweet seventeen." One of them is headed "For Barreness," and runs as follows: "The man and the woman are to drink a teacupful of clove water before they go to bed; this is a sovereign remedy in Egypt in these cases, and Dr. Hasselquist says that he was told at Cairo that a woman who had been barren for many years had conceived by using this simple medicine. A midwife told himself that she had often prescribed it with success." Miss Pinkerton would have been horrified had such a prescription found its way inside the chaste gates of the Academy on Uhiswick Mall.

"THE BATTLE OF THE CLUBS: A SUCCESSFUL PRECEDENT."

To the Editors of THE LANCET.

SIRS,—The answer to Mr. C. B. Townshend's inquiry in THE LANCET of Dec. 1st (p. 1630), is that our collector is paid a nominal salary of 1s. a week (which makes him legally our servant) and 10 per cent. on the collections. At first canvassing was not only permitted, but we considered that it was necessary, for otherwise the existence of our association could not have become so generally known amongst the working classes and without it we could not well combat the large medical aid society which was opposing us. Our committee did not, under the circumstances, hesitate to canvass, for it must be remembered there is a very great difference between canvassing in the interests of an individual practitioner and canvassing for an association which represents practically the whole of the medical profession in

the town. For some little time, however, our collector has not been allowed to canvass, partly because we did not feel that latterly anything was gained by it, but principally because we were anxious to observe the letter as well as the spirit of the resolution passed by the General Medical Council in June, 1899. And practically, though there is no absolute guarantee that the collector does not and cannot canvass, yet when it is remembered that he makes a very good income without canvassing, that canvassing is contrary to our express instructions which he can only infringe at his peril, and, lastly, that we never receive complaints from any source of canvassing having occurred, I think we are justified in concluding that Mr. Townshend's apprehension that our instructions will prove "futile" is not likely to be realised. One positive advantage in paying the collector by commission is that he is stimulated to collect "arrears" with regularity, which is, of course, very important in the interest of both medical men and members.

I am Sirs, yours faithfully,

Dec. 1st, 1900. A. HARPER, Hon. Sec.

TREATMENT OF CONSUMPTION BY ARSENIC.

To the Editors of THE LANCET.

SIRS,—I should feel much obliged if you or any of your readers could kindly inform me whether anything is known in this country of Professor Gautier's treatment by the use of cacodylate of soda as described by the Paris correspondent of the *Daily Telegraph* of Dec. 1st as the result of an interview with the professor. According to this Professor Gautier has been employing this remedy for some considerable time and with large, though not invariable, success. I should also like to know where it is to be obtained and whether it is administered by the mouth as well as hypodermically and if so in what doses and in what form.

It appears his method of administration is to inject two centigrammes the first day and five on the second and subsequent days for a week and then to stop for a week, and so on every alternate week.

I am, Sirs, yours faithfully,

Dec. 4th, 1900. L.R.C.P. & S. I.

*** The subject is dealt with in an annotation this week, and frequent references have been made to the subject in our columns. See THE LANCET of June 17th (p. 1667) and Nov. 18th (p. 1408), 1899, and March 10th (p. 736), April 7th (p. 1037), and Nov. 17th (p. 1446), 1900.—ED. L.

A SUGGESTION FOR THE UNIVERSITIES OF OXFORD AND CAMBRIDGE.

To the Editors of THE LANCET.

SIRS,—The University of Durham is open to any medical man who has reached the age of 40 years and has been over 15 years in the practice of his profession and who passes the necessary examinations. What is really wanted is for the other universities in Great Britain to open their portals a little wider and to admit any registered practitioner to offer himself for the degree of Doctor in Medicine. There would be a direct inducement for post-graduate study during the early years of waiting for practice; the standard of examination should not be lowered in any way and the age might remain as at present, not lower than 25 years. In this way the universities would hold out the truest inducements for continued study and I do not think that they would in any way injure their residential graduates and at the same time they would replenish their empty money-chests. The University of Cambridge has for years past been appealing to the public for subscriptions, which appears to me to be a far more undignified position than would be the acceptance of fees from London and other diplomates for the degree of M.D. The University of Cambridge already confers a diploma in Public Health upon qualified medical men who have never given any residence in Cambridge; Oxford also does the same; surely they could be induced in conjunction with a little persuasion from the Royal Colleges of Physicians and Surgeons of London to swing their portals a little wider and thus take away a bone of contention from those who are so eager to call themselves "Doctor."

I am, Sirs, yours faithfully,

ONE WHO HAS PASSED THE EXAMINATIONS AND TAKEN THE DEGREE OF DOCTOR OF MEDICINE AFTER HAVING COMPLETED HIS FIRST HALF CENTURY.

Dec. 2nd, 1900.

"MOTOR-CARS FOR MEDICAL MEN."

To the Editors of THE LANCET.

SIRS,—Permit me to give my experience of 12 months' use of a motor-car. Having had serious losses with horse-keeping I determined as an experiment to try a car. I sold out and bought a "Benz" and started running it in October, 1899. My coachman soon dropped into its management. We have run it every day with, perhaps, two or three exceptions at the most, since, and I have never had occasion to hire, although I quite reckoned upon having to do so at one time or another. I have also used it in fine weather when not busy for making excursions into the country, sometimes going 40 miles in an afternoon. Our only troubles have been due to our own want of knowledge and not to any fault in the engine. They consisted of a hot bearing on two occasions due to our own fault in not properly looking after the grease boxes, and of short-circuiting of the electric current, generally at a point on the top of the battery under the seat, the result of imperfect insulation. This is remedied (when discovered) by inclosing coil in an old piece of hose-pipe split down the middle and sprung upon the coil.

The initial outlay on purchase of car was £230, which included hood, apron, electric light to lamps, and one inside, &c. The expenses for the 12 months have been: repairs, painting, &c. (engineer and coach-builder), £12 10*s.* 6*d.*; petrol, £10 17*s.*; carriage, &c., £1 10*s.* 2*d.*; pair of new chains, £3; re-charging cells five times, 7*s.* 6*d.*; total, £28 5*s.* 2*d.* I can quite understand a motor-car giving trouble to an owner who has no taste for, or much knowledge of, mechanics, for it wants learning, but when thoroughly understood a great deal of expenditure for repairs, &c., is saved, and in my experience there can seldom be any difficulty. I have travelled through water about two feet deep and through snow when my professional brethren were unable to take their horses out. My troubles with the car have been as nothing compared to those of a brother practitioner, who to my knowledge has changed horses three times, with the usual losses accompanying such transactions, and has been thrown, with his man, out of his gig by reason of his horse stumbling, and smashing both shafts, all within the 12 months. The slight smell of exploded petrol left behind in the street is not to be compared in disagreeableness to the aroma of the stable and all its offensiveness. The habits of horses in the streets are particularly offensive before ladies; but because we are accustomed to these they are apt to be forgotten when weighing the *pros* and *cons*. Once only have I been "hung up," and had I only had the "gumption" to lift up the seat and look at the battery I would have seen the spark flitting across from the coil into the battery again and so saved myself much wasted time and some of the above expenditure and have proceeded on my journey within the space of three minutes.

I am, Sirs, yours faithfully,

East Molesey, Nov. 25th, 1900. W. W. HARDWICKE, M.D. St. And.

P.S.—A man is indispensable to look after a motor-car and he is useful also in his spare time about the house and garden.

To the Editors of THE LANCET.

SIRS,—It is, perhaps, natural that in a journal devoted to the "frailties of human nature," the morbid anatomy of auto-cars should find a place also. Be this as it may, it appears tolerably certain that some of your correspondents have passed through sundry trying experiences. There is one thing in particular that I take exception to, however, in Mr. Lupton's letter in THE LANCET of Dec. 8th (p. 1705). He says: "..... *I know nothing of pneumatics*," and having made the admission that he is not qualified to speak from practical experience of them, he proceeds to warn all and sundry against them as "one having authority." Now, is this quite fair? Fortunately, my experience has been widely different from his, though I profess to be nothing but an amateur with the most ordinary capabilities and of quite average intelligence in matters mechanical. Nevertheless, I am still using a motor-tricycle over town and country roads, some of which are simply bogs of mud and wildernesses of newly-laid metal. I have travelled in various cars over 4000 miles, have never had a puncture, and have never kept a patient waiting. Moreover, although riding a tricycle in the present weather, I can arrive anywhere without any outer crust of mud. At this time of the year I find that I can only run about three miles for a penny, but in the summer I can manage 10 for the same sum. I make these remarks after a year's experience of most kinds of motor-cycles and motor-cars. I am, Sirs, yours faithfully,

CLAUDE A. P. TRUMAN,
Honorary Secretary, Reading Automobile Club.

Reading, Dec. 8th, 1900.

ERRATUM.—In Mr. Lupton's letter on "Motor-cars for Medical Men" published in THE LANCET of Dec. 8th (p. 1705) the words "about 3*d.* per mile" ought to be *0·3d.* per mile.

"HOSPITAL ABUSE: A SIDE THAT IS SOMETIMES OVERLOOKED."

To the Editors of THE LANCET.

SIRS,—The concluding sentences of "A Hospital Surgeon's" letter in THE LANCET of Nov. 3rd (p. 1320), wherein he makes a tilt at general practitioners, seem rather unintelligible without some elucidation. Hospital abuse might affect a hospital surgeon's "right to a living" in some cases the following incident may show. I was lately attending a young woman for anæmia and casually remarked that her eye, sight must be attended to, meaning to see to the matter myself when she was stronger. However, she understood that I referred her to an oculist and presented herself at a certain eye hospital. Though only belonging to the working-class, she was apparently "spotted" as a hospital abuser and was told by an official that she was not a proper case for gratuitous treatment and that she could not be attended to there. On inquiring what to do she was given the name and address of one of the hospital surgeons. She attended at this gentleman's house and he very kindly agreed to see her for a fee of 5*s.* at each consultation. When I saw her she had paid him two visits, her pupils were widely dilated, but her eyes had not been finally tested. By the time the affair was finished I daresay the hospital surgeon had earned h guines. I am stating the facts as related to me by my patient and do not wish in any way to bring a charge against hospital surgeons, who have generally been most kind and courteous to me; at the same time these facts may throw a little light on the occasional connexion between hospital abuse and the "right to a living."

I am, Sirs, yours faithfully,

Nov. 3rd, 1900. GENERAL PRACTITIONER (Z).

A CURIOUS POSITION.

To the Editors of THE LANCET.

SIRS,—A and B are friends. A goes for a holiday and leaves his "friend the enemy" B to look after his work. *Inter alia* B is called to a case C, treats it, and on leaving at the end of about 10 days asks whether C is A's patient. The answer is: "Oh, no; I went on an emergency, was redirected to you, and refused my name at A's to prevent any bother. If I am anybody's patient I am D's (a practitioner at a distance)." A says B should take the fees. B says he thinks, under the circumstances, he should send in the bill and hand over the amount to A. Of course B cannot prevent C coming to him on another occasion. It may interest some of your readers to know what THE LANCET thinks.

I am, Sirs, yours faithfully,

Dec. 11th, 1900. B. A. H.

*** We think that B should send in the account and retain the fees. We also think that such excellent understanding between professional brethren is good for the welfare and dignity of all medical men.—ED. L.

"MY CHEMIST."

A CORRESPONDENT has sent us an advertisement put forth by an enterprising druggist. We reproduce a portion. Opposite to each stanza of the "poem" is a short description of some preparation or article supposed by the advertiser to be good for the particular pathological condition indicated in the stanza, the price being also stated.

When helpless in my cot I lay,
And screamed for bottle night and day,
Who sent the foods that made me gay?
My *chemist*.

When through my hard and swollen gum
The tardy tootsey would not come,
Who with his powders made things hum?
My *chemist*.

When headlong down the stairs I fell,
And bumped my brow and made it swell,
Who bandaged me and got me well?
My *chemist*.

Who helped me when I coughed and sneezed,
And my poor throat and bronchials eased,
And with sweet dose my palate pleased?
My *chemist*.

When on the pudding and the cake
Too vigorous assault I make,
Who takes away my stomach-ache?
My *chemist*.

And when, to keep a birthday up,
Too oft I drain convivial cup,
Who rights me with a pick-me-up?
My *chemist*.

And when I limp with many a corn
Into his shop with look forlorn,
Who heals my toes before the morn?
My *chemist*.

Who keeps my hair from turning grey,
And will not let my teeth decay,
And charms my wrinkles all away?
My *chemist*.

So with his praise where'er I go,
I'll burden all the winds that blow,
Till everyone around shall know
My chemist is

Here follows the name of the druggist. It hardly seems worth while for a man to spend five years and from £1000 to £1500 in getting qualified without getting some sort of protection from this kind of chemist.

"HAVE MATERNAL IMPRESSIONS ANY EFFECT ON THE FŒTUS IN UTERO?"

To the Editors of THE LANCET.

SIRS,—So far as I am aware this controversy has hitherto consisted of the quotation of apparent instances of this marvel and of the reply that wars are not followed by an unusual proportion among the births of infants congenitally deficient in a limb and of similar counter arguments. If, however, any systematic and scientifically conducted experiments upon the lower animals have been tried already I should be much obliged by having my ignorance corrected.

I am, Sirs, yours faithfully,

CHARLES G. STUART-MENTEATH

Upper Bedford-place, W.C., Nov. 23rd, 1900.

To the Editors of THE LANCET.

SIRS,—In THE LANCET of Nov. 3rd (p. 1266) there appeared an interesting article on the above subject by Dr. W. Duncan, but surely it scarcely requires the name of this eminent authority in order to convince the medical profession generally that so-called maternal impressions—the powerful ones, at all events—do exert an appreciable and visible result on the child in utero. The instances brought to light and published are now far too numerous to allow us to doubt what to my mind has been long an established fact. Probably there are few general practitioners who have not had at one time or another absolute evidence of the result of these powerful impressions. Two examples are clearly in my remembrance. A young mother had a boy a year old who had hypospadias. She was on a sea voyage with him and was so ill that she was not able to bath the child herself. A friend who was two months pregnant undertook the task for many days. When in due course of time her own child (a boy) was born he was found to be suffering from the same abnormality and exactly to the same extent as the child she had so diligently nursed. The second case is that of a lady friend of mine who in the early days of pregnancy had her eyes fixed often and earnestly on the well-known picture of "Bubbles" which, hanging in her bedroom, seemed to possess a peculiar attraction for her. In due time a beautiful boy was born who gradually developed into an exact image of the boy in the picture. But, further, it is my firm conviction that not only powerful maternal impressions which have their origin in physical causes may and do affect the physical form of the child, but that impressions which owe their origin to purely subjective thought in the maternal mind will induce a certain condition corresponding to, and on parallel lines with, the particular train of thought uppermost in the mind of the mother—in other words, a fixed and continuous maternal idea without the extraneous aid of a material object may have the same result as when the mother has the object or model continually before her physical sight. "Nothing is, but thinking makes it so." I "go one more" and maintain that a strong and continuous current of thought in a fixed line and having for its object the definite purpose of affecting the mentality of the child in a certain direction will not be void of result. The reason why so little proof in support of this statement is forthcoming is due to the fact that in the first place so few have the necessary concentration of thought; and secondly, because the great mass of people are still so crassly ignorant of the wondrous power of mere thought. Thought radiates from us all and at all times for good or evil; it moulds and alters matter and is transferred from one mind to another more or less easily. All this is now acknowledged and preached by scientists, philosophers, and religionists. Granted, then, that thoughts are actual (potent) things, and that maternal impressions produce impressions both physical and psychical on the unborn child, what a tremendous responsibility, what a power for good or ill, expectant mothers exert! As a matter of fact, they should hold firmly before their mental vision and carry out in their actual life all which is truest, highest, and best, so that their truer, higher, and better life will be reflected on the physical, mental, and spiritual being of their children. The consummation of this happy state of affairs would go far to alter the natural trend of hereditary evil influence, and given a father who lives a life of extreme "moderation in all things" and who has learnt that man is a spiritual being and not a mere animal, the resultant of mutual love (not lust), in spite of all hereditary tendencies, would blossom into something bright and beautiful. As it is, parents are guilty of a great crime in sending forth into the world countless helpless children who are nothing but the reflexes of their own animalism.

I am, Sirs, yours faithfully,

Hastings, Nov. 26th, 1900. J. STENSON HOOKER, M.D. Durh.

To the Editors of THE LANCET.

SIRS,—In support of Dr. W. Duncan's proposition in THE LANCET of Nov. 3rd (p. 1266) I can mention a case strongly pointing to the influence of maternal impression. About 15 years ago I attended the wife of a publican with her first child. The child when born was found to be completely minus a left hand, the forearm terminating in a rounded stump at the wrist. As soon as the birth was over the mother made anxious inquiries as to whether the child was "all right," but I had to tell her of the deformity, at which she expressed no surprise as she felt certain that something would be wrong. She then gave me the following account which I had no reason to doubt. One day in her early months of pregnancy while behind the bar two men came in for refreshment, one of them said that he had recently met with an accident necessitating amputation of his left hand; to support his words he uncovered the stump, which was scarcely healed, and exposed it to view. The sight, as the woman said, gave her "quite a turn" at the time. Now, one can scarcely accept this as a mere coincidence; the fact of the complete absence of the hand, and, stranger, the *left* one, coupled with the anxiety of the mother to know the condition of her child immediately after birth, negatives such a theory. I am, and for some time have been, a believer in maternal impressions, but I think such impressions would only operate in an early stage of fœtal development, as it is scarcely conceivable that, supposing a woman advanced to her middle or later stage of pregnancy, nature would deliberately amputate a hand already formed in utero. As to *how* nature works in such a case in building up the fœtus I offer no theory.

I am, Sirs, yours faithfully,

Reading, Nov. 27th, 1900. J. G. BRADEN, M.R.C.S. Eng., &c.

Fairplay.—The matter is purely legal and A must consult his solicitor as to the interpretation of his agreement.

R. W. W.—Reports appeared in THE LANCET of June 18th, 1898, page 1697, and May 5th, 1900, page 1290.

B. will find the subject dealt with in an annotation in the present number.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Stewart's Instruments.)

THE LANCET Office, Dec. 13th, 1900.

Date	Barometer reduced to Sea Level and 32° F	Direction of Wind	Rainfall	Solar Radiation in Vacuo	Maximum Temp. Shade.	Min Temp	Wet Bulb	Dry Bulb	Remarks 8.30 A.M.
Dec. 7	29·96	WSW	0·17	59	52	45	44	45	Overcast
,, 8	30·16	S.	0·02	60	55	45	50	51	Cloudy
,, 9	30·04	WSW	..	66	55	51	52	55	Cloudy
,, 10	30·36	WNW	0·02	60	49	42	42	43	Hazy
,, 11	30·16	S.W.	..	56	53	43	47	49	Cloudy
,, 12	30·10	S.W.	0·02	62	57	49	52	53	Cloudy
,, 13	29·97	S.W.	..	58	55	52	53	54	Raining

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS

MONDAY (17th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (2 P.M.).

TUESDAY (18th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P.M. and 6 P.M.), Royal Ear (3 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.).

WEDNESDAY (19th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George's (Ophthalmic 1 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P.M.), Cancer (2 P.M.)

THURSDAY (20th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.) University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P.M.), St. Mark's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.).

FRIDAY (21st).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M., Ophthalmic 10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (2 P.M. and 6 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.).

SATURDAY (22nd).—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (2 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), London Throat (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

MONDAY (17th).—SOCIETY OF ARTS.—8 P.M. Prof. J. A. Fleming: Electric Oscillations and Electric Waves. (Cantor Lecture.)

TUESDAY (18th).—PATHOLOGICAL SOCIETY OF LONDON (20, Hanover-square, W.).—Paper:—Mr. F. T. Paul (Liverpool): Chronic Mastitis and its Relation to Tumour Formation (lantern demonstration). Card Specimens:—Dr. J. H. Drysdale: Broncho œsophageal Fistula.—Mr. Scholberg: Hæmorrhagic Pancreatitis with Fat Necrosis.

WEDNESDAY (19th).—ROYAL MICROSCOPICAL SOCIETY (20, Hanover-square, W.).—8 P.M. Mr. Barton: Demonstration of Lantern Projection in conjunction with the Microscope.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c

MONDAY (17th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Mr. M. Morris: Consultation. (Skin.)

LONDON TEMPERANCE HOSPITAL.—3 P.M. Dr. Addinsell: Some Abdominal Tumours.

TUESDAY (18th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Dr. C. T. Williams: Consultation. (Medical.)

WEDNESDAY (19th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—5 P.M. Clinical Lecture:—Dr. B. Yeo: The Treatment of Tubercular Peritonitis.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST (Brompton).—4 P.M. Dr. Habershon: Emphysema.

THURSDAY (20th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Mr. J. Hutchinson: Consultation. (Surgical.)

LONDON TEMPERANCE HOSPITAL.—2 P.M. Dr. S. Fenwick: Clinical Demonstration.

FRIDAY (21st).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Dr. H. Tilley: Consultation. (Throat.)

LONDON TEMPERANCE HOSPITAL.—2 P.M. Dr. P. Parkinson: Case of Tricuspid Regurgitation.

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